Upstream Petroleum Incident Support Plan

Registered Plan Copy No. _____

Alberta
Municipal Affairs
Emergency Management Alberta

Amendment 01 – December 15, 2005

ACKNOWLEDGEMENTS

The support and assistance provided by the plan stakeholders in the development of this emergency response support plan are gratefully acknowledged. Special thanks is given to the following organizations for their time, input and dedication:

- Alberta Energy and Utilities Board
- Alberta Environment
- Alberta Health and Wellness
- Alberta Human Resources and Employment – Workplace Health & Safety
- Alberta Sustainable Resource Development – Fisheries and Wildlife
- Alberta Sustainable Resource Development – Forest Protection
- Canadian Association of Petroleum Producers
- Canadian Energy Pipeline Association
- Regional Health Authorities – Capital Health Authority, Mistahia Regional Health Authority, Palliser Health Authority, Headwaters Health Authority, Keeweetinok Lakes Regional Health Authority #15 and Aspen Regional Health Authority #11

If you have any comments with respect to this plan, please contact:

Emergency Management Alberta
Alberta Municipal Affairs
14515 – 122 Avenue
Edmonton, Alberta T5L 2W4

Phone: 310-0000, then ask to be connected to (780) 422-9000 or dial 422-9000 in the Edmonton area.

E-mail: ema@gov.ab.ca

Web site: www.municipalaffairs.gov.ab.ca/ema/

The plan is available in electronic format from Emergency Management Alberta.

ISBN 0-7785-1888-4

5th Edition

Copyright © 2002, the Crown in the Right of Alberta, as represented by the Minister of Municipal Affairs, Alberta Municipal Affairs, Emergency Management Alberta, 14514 – 122 Avenue, Edmonton, Alberta, Canada, T5L 2W4.

All rights reserved. Permission is hereby given by the copyright owner for any person to reproduce this document or any part thereof for educational purposes and on a nonprofit basis.

RECORD OF AMENDMENTS

Emergency plans may require adjustments and amendments due to a number of factors, such as: changes in roles and responsibilities due to reorganizations, lessons learned from actual incidents, or just streamlining and improving the plan.

To assist in keeping all the registered copies of the plan current, a person in each organization must be assigned the responsibility of maintaining this plan and keeping the plan current. This Record of Amendments page will assist in this process. The plan has been constructed in such a manner to facilitate the amendment process.

The person responsible for maintaining this registered copy of the plan is:

Name: _____

Title: _____

Telephone No.: _____ *Fax:* _____

Email: _____

Amendment Number	Date of Amendment	Title of Amendment	Initials
01	Dec 15, 2005	Amendment List 01/05	
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			

Record of Changes

Amendment 01/05 – List of Changes

1. Title Page back – Change Contact E-Mail address and Emergency Management Alberta Webpage.

2. Page 10 – Para 1.4 reworded.

3. Annex O – Contact numbers for the Regional Health Associations updated.

FOREWORD

Alberta has always had excellent emergency plans in place. We are seen as leaders in emergency management in preparing for, responding to and recovering from emergencies. Municipalities in Alberta have multi-hazard emergency plans for responding to both natural and technological emergencies. In some municipalities, upstream petroleum industry operations (e.g., exploration, drilling, production, transportation, and refining) present one of the many technological hazards that require preparedness and preplanning.

Upstream operators are required by the Alberta Energy and Utilities Board to develop and maintain emergency response plans. These plans include both corporate-level and detailed site-specific emergency plans for high-hazard facilities and transport systems. Copies of these plans are forwarded to the municipalities where these facilities and transportation systems are located.

It is essential that the upstream operator's emergency response plan and the municipal emergency plan are compatible and complement each other. This is achieved through consultation and cooperation. Through this process expertise and resources can be maximized should an emergency occur.

If an upstream petroleum industry emergency occurs, the first response priority is the safety of the public and the emergency responders. The second response priority is to reduce the impact on property and the environment. This is achieved through the preparedness activities of the upstream operator and the municipality.

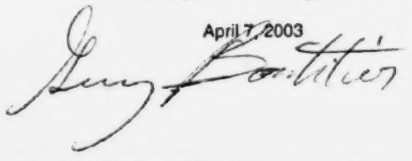
Once an incident occurs, the emergency plans of the upstream operator and the municipality would be activated to deal with the emergency. This plan would also be activated. In addition, this Alberta support plan would make additional provincial resources available, as they are requested to support the local response. This Alberta plan explains the roles of provincial government departments and coordinates the provincial government's response to an upstream petroleum industry incident anywhere within Alberta.

Prior editions of this Alberta plan focused on sour gas release incidents. This fifth edition is a multi-hazard plan and includes all upstream petroleum industry incidents. It should be recognized that this plan provides the framework and coordination between the public and private sector organizations during an emergency. It is not intended to contain specific policy or procedures. These may be found with each individual organization.

The upstream petroleum industry is recognized as a major contributor to the economy of the province. Thank you for your continued efforts in being more ready than ever with your emergency preparedness training.

Hon. Guy C. Boutilier
Minister, Alberta Municipal Affairs

April 7, 2003



CONTENTS

Section	Subject	Page
	Acknowledgements	i
	Record of Amendments	ii
	Foreword	iii
1	**Background**	1
1.1	General	1
1.2	Threats	1
1.2.1	Hazards	1
1.2.2	Probability vs. Risk	2
1.3	Partnerships	2
1.3.1	Upstream Operator	3
1.3.2	Local Authority	3
1.3.3	Provincial Government Departments	3
1.3.4	Federal Government Departments	4
1.3.5	Other Partners	4
1.4	Emergency Personnel Assignments	4
1.4.1	Level 1 Low Impact Incident	5
1.4.2	Level 2 Moderate Impact Incident	5
1.4.3	Level 3 High Impact Incident	6
2	**Plan Objective**	7
2.1	Objective	7
2.2	Factors	7
2.3	Assumptions	7
3	**Action Plan**	7
3.1	General Principles	7
3.1.1	Preparedness Before the Incident	8
3.1.2	Action During the Incident	8
3.1.3	Action Following the Incident	8
3.2	Organizational Involvement	9
3.2.1	During Incident	9
3.2.2	After Incident	10
3.3	Common Tasks	10
3.3.1	Before Incident	10
3.3.2	During Incident	11
3.3.3	After Incident	13
3.4	Task Matrices by Organization	14
3.4.1	Checklists	14
3.5.	Coordination During Incident	14
3.5.1	Response Management Centres	14
3.5.2	Response Organizations	16
3.5.3	Alert and Notification	16
3.5.4	Liaison Officers	16
3.5.5	Priorities	19
3.5.6	Communications Access	19
4	**Support**	20

Section	Subject	Page
4.1	General	20
5	**Control, Coordination and Communications**	21
5.1	Control	21
5.2	Contacts	22
5.3	Protocols	22
5.4	Log Keeping and Documentation	22
	Appendixes	
A	Emergency Plan Compatibility	A-1
B	Definitions	B-1
C	Acronyms	C-1
D	Hazards and Hazard Information	D-1
E	Level 2 Moderate Impact Incident Communications and Support Structure	E-1
F	Level 3 High Impact Incident Communications and Support Structure	F-1
G	Incident Information Gathering Form	G-1
H-1	Alberta Environment	H1-1
H-2	Energy and Utilities Board	H2-1
H-3	Human Resources and Employment – Workplace Health and Safety	H3-1
H-4	Upstream Operator	H4-1
H-5	Local Authority	H5-1
H-5.1	Local Authority – Emergency Services	H5.1-1
H-6	Municipal Affairs, Emergency Management Alberta	H6-1
H-7	Regional Health Authority	H7-1
H-8	Sustainable Resource Development, Natural Resources	H8-1
I	Government Notification and Call Down System Diagram	I-1
J-1	Emergency Telephone Numbers	J1-1
J-2	EUB Field Centres Map	J2-1
K	Post Incident Response Form	K-1
L	Guide for Determining Impact Level and Possible Actions	L-1
M	Agreements, Memorandums of Understanding and Information	M-1
N	Emergency Preparedness in Alberta	N-1
O	Regional Health Authorities	O-1
O – RHA's	Maps of Regional Health Authorities	O-RHA
P	Dominion Land Survey System	P-1
Q	Follow-up Process After Major Sour Gas Releases to Determine Impacts	Q-1
	Tables	
1	EPO, Liaison Officer, Representatives Assignments	18
2	Operations and Operational Support	20

1. BACKGROUND

1.1 General. This support plan provides a framework to direct and coordinate how the government and the private sector will respond to a serious upstream petroleum industry incident. The primary objective is to support the upstream operator and the local authority in protecting the public and to bring the incident safely under control. Although the industrial operator will most likely initiate the emergency response, the local authority will be the lead response agency in matters affecting public safety within their jurisdiction. It is essential that all the emergency plans are compatible, especially the upstream operator's emergency response plan (ERP) and the municipal emergency plan (MEP). As the prime regulator of the upstream petroleum industry, the Alberta Energy and Utilities Board (EUB) will be the primary contact for the provincial government when there is a response to an emergency incident. This relationship is described further in Section 1.3: Partnerships.

Emergency Plan Compatibility. To maximize the response to an upstream petroleum industry incident requires that both private and public sector emergency plans and procedures are compatible and complement each other. For more information on this subject refer to Appendix A.

1.1.1 Definitions. Communications and understanding is critical in any emergency response especially when there is a multi-organization response. That is why Appendix B has been included as a part of this plan so there is a clear understanding of the words and terms contained in this plan.

1.1.2 Acronyms. Acronyms are normally used to abbreviate communications in order to save space or time. Many of the acronyms the may be used in association with this support plan can be found in Appendix C.

1.2 Threats

1.2.1 Hazards. Some of the acute hazards associated with an upstream petroleum incident may include

- toxicity
- asphyxiation
- high pressure release
- pressure/blast waves
- projectiles
- fire
- other hazards (e.g., health and environmental)
- or any combinations of the foregoing hazards.

This plan only addresses the acute health effect that may be manifested by the potential hazards.

Some product-specific health hazard information is given in Appendix D. For more detailed information contact the upstream petroleum industry organization who owns or has control of the product at the time of the incident.

1.2.2 Probability vs. Risk. Historically the vast majority of the incidents that occur in the upstream industry do not have any significant impact on the community. Such incidents include odours, noise, increase in truck traffic, and lighting required for nighttime operations. These are usually related to the upstream operator's site and are handled by on-site staff. Occasionally there is a serious incident that may have the potential for moderate to high impact (see Definitions section for more detailed information) within a community. When a moderate or high impact incident occurs, this support plan may be activated by the EUB. If there is an incident, the upstream operator or the municipality should report this to the EUB. Once activated, the plan assists the upstream operator and the municipality involved in the response by providing the response framework, coordination, notification and mobilization of provincial resources.

1.3 Partnerships

There are a number of organizations that must be prepared to respond, support, and coordinate the response to a serious upstream petroleum industry incident. Some of these organizations have regulatory responsibilities as well. Therefore once the upstream emergency plan is activated the response effort must be immediate, well organized, and coordinated. Each party must understand the roles and responsibilities of the response partnership and its own involvement within this plan (more detailed information is provided later in this document). The partnership includes

- upstream operators
- local authorities (municipality)
- regional health authorities
- provincial government departments and agencies
- federal government departments and agencies (for federal jurisdiction or upon request)

Detailed memoranda of understanding (MOU) are in place and they solidify the partnerships (see Appendix M).

The initial response involves the upstream operator, who will work closely with the local authority when there is a threat to the public or the environment (see Appendix D: Hazards and Hazard Information for examples of potential threats). Provincial and, in some cases, federal government departments may mobilize to support this response.

Although this partnership exists, it should be noted that when there is a moderate or high impact emergency that all emergency response activities required to protect life and health of people would take priority over any regulatory investigations.

1.3.1 Upstream Operator. The upstream operator must consult with the local authority concerning emergency preparedness activities for which an ERP is required. This will ensure that emergency plans including response actions are compatible and there is a good understanding of response capability of both organizations. This should also make the upstream operator aware of any "hard to evacuate" locations in the community and any other unique situations.

1.3.2 Local Authority (municipality). The local authority is required to have a Municipal Emergency Plan (MEP). The MEP is an "all hazards" approach to emergency planning and response. The local authority may also have arrangements and agreements in place with neighbouring municipalities should additional resources be required. The local authority is the lead agency in matters concerning public safety within its jurisdiction. For the purposes of the MEP, the Royal Canadian Mounted Police (RCMP) is considered to be a resource of the local authority.

1.3.3 Provincial Government Departments. Provincial government departments may have a regulatory responsibility, expertise, or other resources available to support the upstream operator's and/or local authority's emergency response to an upstream petroleum industry incident. These departments include, but are not limited to

- Agriculture, Food and Rural Development
- Energy
- EUB
- Environment
- Health and Wellness

- Human Resources and Employment
- Infrastructure
- Justice and Attorney General
- Municipal Affairs
- Public Affairs Bureau
- Sustainable Resource Development
- Transportation

1.3.4 Federal Government Departments/Agencies. Federal departments and agencies may become involved in an upstream petroleum industry incident. Extra-provincial transport systems are regulated federally. In other situations, the province may request federal resources through Alberta Municipal Affairs - Emergency Management Alberta in a very serious upstream incident.

Typical federal department and agencies that may become involved in a upstream petroleum industry incident include, but are not limited to

- Agriculture and Agri-Food Canada
- Canadian Transportation Agency
- Environment Canada
- Fisheries and Oceans
- Department of Canadian Heritage
- Human Resources Development Canada
- Indian and Northern Affairs Canada
- National Defence
- National Energy Board
- Natural Resources Canada
- Office of Critical Infrastructure Protection and Emergency Preparedness
- Transport Canada

1.3.5 Other Partners. There are other organizations that may become involved in supporting the response of the local authority because they have a responsibility to do so or offer specialized knowledge or expertise and equipment. Some types of potential partners are

- industrial mutual assistance groups
- industrial contracted emergency response specialists
- regional health authorities
- community groups
- technical advisers
- non governmental organizations (e.g., Salvation Army, Red Cross)

1.4 Emergency Personnel Assignments. Emergency assignments are intended to enhance and support the response efforts of the upstream operator and the local authority. Therefore, they will depend upon the nature and seriousness of the upstream incident and its impact on the community and the environment. The EUB assesses each incident and activates this support plan as required. When the plan is activated, personnel identified in the plan will likely be required to support the response at the industrial site command post, on-site command post (OSCP), off-site regional command post (REOC) and Emergency Management Alberta's Consequence Management Operations Centre (COMOC) when it is activated.

The upstream operator and/or the EUB will assign a level of impact for each upstream incident. Typical requests for external personnel to augment a level 2 or 3 impact incident will come through the EUB. Typical personnel assignments based upon the three levels of impact are

1.4.1 Level 1/Low-Impact Incident. This is a minor or short duration incident and will be handled by the upstream operator's on-site staff.

1.4.1.1 Industrial Site

- Possibly EUB field staff to investigate
- Possibly other regulatory staff to investigate

1.4.2 Level 2/Moderate-Impact Incident. This is an incident where there is no immediate danger outside of company property but the potential exists for the emergency to extend beyond company property.

1.4.2.1 Industrial Site –On-Site Command Post (OSCP)

- Upstream operator's operations staff
- Upstream operator's contracted staff (when needed)
- EUB representative(s)
- Alberta Environment representative
- Local authority representative(s)

1.4.2.2 Off-site Regional Emergency Operations Centre (REOC)

- Upstream operator's liaison person(s)
- Upstream operator's public affairs representative(s)
- EUB REOC operations staff
- EUB communications staff
- Alberta Environment representative and air monitoring coordinator
- Local authority's representative(s)
- Regional Health Authority's representative

- Human Resources & Employment – Workplace Health & Safety representative (when requested)
- Municipal Affairs, Emergency Management Alberta headquarters staff member (when requested)

1.4.2.3 Municipal Emergency Operations Centre

- Municipal Affairs – Emergency Management Alberta field officer (when requested)
- Upstream operator's representative (when requested)

A diagram showing the normal support and communications flow for moderate impact incidents is found in Appendix E.

1.4.3 Level 3/High-Impact Incident. This is an incident where there is an uncontrolled hazard, where public safety is jeopardized, or there is significant and ongoing environmental impacts.

1.4.3.1 Upstream Site –On-Site Command Post (OSCP)

- See 1.4.2.1 above

1.4.3.2 Off-site Regional Emergency Operations Centre (REOC)

- See 1.4.2.2 above with these changes:
  - Upstream operator's complete liaison staff
  - Upstream operator's complete public affairs staff

1.4.3.3 Municipal Emergency Operations Centre (MEOC)

- See 1.4.2.3 above.

1.4.3.4 Consequence Management Operations Centre (COMOC) (when needed)

- Municipal Affairs Emergency Management Alberta staff
- EUB liaison officer
- EUB communications staff
- Other provincial and federal emergency planning officers (EPOs) (as needed)

A diagram showing the normal support and communications flow for high impact incidents is in Appendix F.

2 PLAN OBJECTIVE

2.1 Objective. The Upstream Petroleum Incident Support Plan is intended to direct and coordinate the responses of provincial government departments and agencies in order to support the upstream operator and the local authority during an upstream petroleum incident.

2.2 Factors. Factors that are required to maximize the effectiveness of this support plan include:

- Speed of notification by the upstream operator, municipality, or EUB to activate this emergency response support plan
- Defining the level of impact of the incident at the time of notification
- The establishment of communications with the OSCP
- The mobilization of resources to respond to the incident
- The arrangements in this plan are limited to response activities required to protect life, health, property, and the environment

2.3. Assumptions. The following assumptions are made under this plan for level 2/moderate level and level 3/high impact incidents:

- The EUB, through consultation with the upstream operator, determines the level of the incident and communicates this to Municipal Affairs immediately.
- Public safety options (road blocks, evacuation, in-place sheltering and planned ignition) will be implemented by the upstream operator when public safety is at risk.
- The upstream operator will immediately notify the local authority about the incident, the hazards, and what protective actions are being implemented.
- There will be on-going exchange of relevant information at regular intervals during the incident among the partners.

3 ACTION PLAN

3.1 General Principles. This plan coordinates the government's response and makes available provincial and federal resources that may be required in the emergency response to an upstream petroleum industry incident. Through this process, adequate resources and expertise are obtainable to limit the impact upon people, property, and the environment. When the emergency involves a toxic gas release, the implementation of protective actions by the upstream operator may be imperative. These actions should be initiated by the upstream operator and the local authority be immediately notified. When the hazard presents a potential threat to a large segment of the public, the protective actions should be carried out in a cooperative manner with the

local authority. The upstream operator is ultimately responsible for bringing the incident under control. The EUB is the primary contact for the provincial government when there is a Level 2 or Level 3 response to an upstream petroleum industry incident.

3.1.1 Preparedness Before Incident. All organizations and persons identified as having a role in an upstream petroleum industry incident should review this plan. Organizational plans and procedures should be compatible with it. Individual responders require training to carry out functions identified in their organizational plan and must also be able to work with all the various groups they are likely to interact with in the event of the plan being activated. All ERPs must be validated annually and tested on a regular basis.

3.1.2 Action During an Incident. An upstream petroleum industry incident may be discovered and reported by any number of people, including the upstream operator, the local authority's emergency services, or a member of the public. It is essential that the initial report be documented and include the information obtained from the caller as detailed in Appendix G. Should there be a serious injury/fatality the local police/RCMP must be notified. For level 2/moderate or level 3/high impact incidents, it is essential that the local authority, upstream operator, and EUB be notified immediately. The EUB will notify Alberta Municipal Affairs who will notify other provincial departments as shown in Appendix I. The local authority and the upstream operator can then initiate a response designed to protect the life and health of people in the hazard area. After consultation with the upstream operator or the local authority, the EUB may activate this plan, notifying Alberta Municipal Affairs, Emergency Management Alberta, which will initiate the notification (call-down) process. It is essential that the level of impact be communicated at this time, as this will determine who else will be notified.

3.1.3 Action Following Incident. The Post Incident Report Form (Appendix K) will be completed by a representative of each provincial department and agency that actively participated in a level 3 response (where provincial resources were required to support the upstream operator). This report form is designed to assess the overall government response. The completed form will be sent to Municipal Affairs, Emergency Management Alberta to help identify the resources and estimated costs associated with the response.

In accordance with a number of its acts and regulations, the EUB may request a single detailed report of the incident from the upstream operator. The report will address the source and cause of the incident and what steps were taken to regain control of the situation, maintain public safety, and protect the environment. The report will also include a description of what measures will be initiated by the operator to prevent a similar incident from recurring. The EUB may also request that the upstream operator (for a level 2 or level 3) hold a "post incident debriefing" with those members of the public who reside within the emergency planning zone or who have been impacted during the incident.

Reports required by other regulatory authorities must be completed and delivered to the appropriate regulatory body within the time lines they prescribe (e.g., Workplace Health and Safety will respond if there is a serious injury/fatality and conduct an investigation. They may also require worker health and safety perspective and plans for prevention).

3.2 Organizational Involvement. During emergency response, the various organizational partners fulfill specific roles, as detailed below.

3.2.1 During Incident. While the organizations and positions involved vary depending on the type of incident (e.g., well blowout, pipeline rupture, etc.) and the level of impact from the incident, generally, the response may include participation as follows:

- On-Site Command Post (OSCP)
  - Upstream operator – response team members
  - Upstream operator contracted staff (when required)
  - EUB – staff members
  - Alberta Environment – field staff member
  - Local authority – representative(s)
- Off-site Regional Emergency Operations Centre (REOC)
  - EUB operations staff
  - EUB communications staff
  - Alberta Environment air monitoring representative
  - Alberta Environment pollution emergency response team
  - Upstream operator operations staff
  - Upstream operator communication representative(s)
  - Regional Health Authority (for toxic releases)

    - Human Resources & Employment-Workplace Safety representative
    - Local authority representative(s)
    - Alberta Municipal Affairs, Emergency Management Alberta staff
- Municipal EOC (when activated)
    - Local Director of Disaster Services
    - Disaster Services Agency (as required)
    - Alberta Municipal Affairs district officer
    - Industrial operator liaison representative (when requested)
- Corporate REOC (when activated)
    - Company crisis management team
    - Company contracted personnel
- Consequence Management Operations Centre (COMOC) (when activated)
    - EUB operations and communications staff members
    - Alberta Municipal Affairs- Emergency Management Alberta staff
    - Appropriate emergency planning officers (EPOs) from provincial government departments
    - Regional Director, Office of Critical Infrastructure and Emergency Preparedness.

3.2.2 After Incident. Individual organizations that responded to an upstream petroleum incident must each hold a debriefing to review their own emergency response to the incident as soon as possible after the incident has terminated. The results of the debriefing should be documented. Following these internal reviews, a multi-organizational review should be conducted by all of the responding organizations (see section 3.3.3.2). Members of the public who were directly impacted by the emergency may also be invited. This will allow the exchange of information, lead to better understanding of the issues faced during the response, and may result in positive recommendations that may reduce the likelihood of a similar incident occurring or improve the response if one should.

3.3. Common Tasks

3.3.1 Before Incident. The following general tasks are common to all organizations identified within this plan.

3.3.1.1 Plan Review

All emergency plans, including this one, must be reviewed on an annual basis or when there is a significant change in the organization. Plans must be current and maintained.

3.3.1.2 Internal and External Training

Persons identified, as having an emergency function associated with the organizational emergency response plan should receive annual training associated with those responsibilities.

3.3.1.3 Emergency Response Equipment and Facilities

Each government department or agency is responsible to ensure that its emergency response equipment (air monitors, personal protective equipment, etc.) and facilities (OSCP, EOC, etc.) are maintained and in a "state of readiness" at all times. A maintenance/checklist log must be kept for safety equipment and the facility.

3.3.1.4 Exercising Emergency Plans

Emergency plans should be exercised internally at least once per year. A joint, multi-organizational exercise should be done a minimum of once every four years.

3.3.2. During Incident.

3.3.2.1 Initial Reporting of the Incident

The discovery and initial reporting of an upstream petroleum industry incident may come from a number of different sources. The information obtained at this time is critical for making an initial assessment and activating the emergency response system. An example of the information that should be obtained is contained in Appendix G.

3.3.2.2 Assessment of the Incident

The EUB, in consultation with the upstream operator, is responsible for initially assessing the incident and assigning the potential level of impact to it (low, moderate or high level) and informing Alberta Municipal Affairs, Emergency Management Alberta of it. The criteria contained in Appendix L may be used in assessing the incident.

3.3.2.3 Response and Public Protection

The emergency response is based upon the potential level of impact assigned to the incident:

- *Level-1, low impact incident* – local response by the upstream operator. When a level 1/low impact incident involves a critical sour gas well, some individuals within the Emergency Planning Zone

(EPZ) may have to be notified in accordance with EUB *Incident Response and Reporting Protocols*.

- *Level 2, medium impact incident* – response by the upstream operator, the EUB, and the local authority. The REOC may or may not be activated for such an incident. If it is a significant level 2/medium-impact incident (i.e., likely to become a level 3/high-impact incident) the REOC will likely be activated.
- *Level 3, high impact incident* – a coordinated emergency response from the upstream operator, local authority, and the provincial government. This plan will likely be fully activated.

In any upstream petroleum industry incident the safety of the public, workers, and responders is paramount. The threat to the public might be from a number of different hazards, but those that involve toxic, explosive, or flammable petroleum products require quick and decisive public protective actions. This may include evacuation, in-place sheltering or planned ignition. Informed decisions can be made based upon the results obtained from air monitoring.

3.3.2.4 Extraordinary Powers

Should the emergency create a situation for which extraordinary powers are required (e.g., evacuation of the public, sheltering in-place, etc.), the local authority may declare a "state of local emergency." The process for doing this is contained in Section 18 of the Disaster Services Act.

3.3.2.5 The Response

The response must be coordinated between the private and public sectors. The upstream operator, in consultation with the EUB, will likely take the primary role in bringing the incident under control by dealing with the technical aspects of the response. The upstream operator and the local authority will coordinate activities to ensure the safety of the public. Other government organizations will support the response as identified in this plan.

Wherever two or more EOCs (emergency operations centre) are combined in a joint operation, they will operate under the principles of emergency site management (unified incident command).

3.3.2.6. Response Support

This emergency response plan identifies a number of government departments and agencies that may be required to support the response of the upstream operator, EUB, and the local authority to an upstream incident. The nature of the support required is based upon the nature of and the potential level of impact from the incident. The support required will fall into one of the following groups:

- Organizations identified in this emergency plan that have a direct support role at the OSCP, REOC, or MEOC.
- Organizations that will respond to the OSCP or REOC upon the request of the EUB or Municipal Affairs, Emergency Management Alberta.
- Provincial or federal government emergency planning officers who respond to the COMOC upon the request Municipal Affairs – Emergency Management Alberta.

3.3.2.7 General Response Tasks

- Activation of emergency plan(s)
- Alert and carry out notifications
- Establish the OSCP
- Set up and monitor air quality, when required
- Develop of site/incident specific plan of action to mitigate the incident
- Activate the MEOC, when required
- Activate the off-site REOC, when required
- Activation the COMOC, when required
- Maintain exchange of information through situation reports (SitReps)
- Monitor media releases

3.3.3 After Incident

3.3.3.1 Internal Review of Response

The emergency response to an upstream petroleum industry incident should be reviewed within each individual organization involved in the response to determine if the emergency plan and procedures were effective. If changes are to be made to the emergency plan or procedures, they should be done at this time. Incident logs, the expenditure of resources, and lessons learned must be documented. Any changes to ERPs or procedures must be communicated to all ERP holders.

3.3.3.2 Multi-organizational and Public Review of the Response

Alberta Municipal Affairs, Emergency Management Alberta may arrange for a review of the emergency response to major incidents if this plan were activated. The exchange of information at this review is intended to ensure that government emergency plans and procedures are current. The focus is upon improving ERPs and response coordination. Each government organization involved in the emergency response is expected to provide a summary of the information documented as a result of its internal review of the response (Appendix K). It is also an opportunity to share information and expertise gained from the response, as well as to deal with any outstanding issues.

Other government agencies may request an incident report from the upstream operator. The incident report will focus on the cause of the emergency including a determination of the potential impacts that may have resulted from any releases.

Following this review, if warranted, a "lessons learned" document may be produced to share these experiences with all partners so they will be able to review their ERPs and procedures. In this manner, the continuing improvement across the industry and government can take place.

3.4 Task Matrices by Organization

3.4.1 Checklists

Checklists and task matrices for the upstream operator, local authority, and provincial government departments that may have responsibilities under this plan are found in Appendix H-1 to H-8. Each of these is arranged in chronological order, identifying the essential tasks for each phase of an incident. The checklists and task matrices may also be used as a guide during emergency operations. Since they might not correspond perfectly to the incident underway, during each incident, the checklist/task matrix should be reviewed for completeness and expanded or modified as required, and then be implemented.

3.5 Coordination during an Incident

3.5.1 Response Management Centres

The emergency response will be managed and coordinated through the following centres, when they are activated:

- OSCP
- MEOC
- REOC
- COMOC

Note: The actual number of response management centres activated during an emergency response may vary depending on the incident and its impact, therefore not all of the above may be needed.

A response management centre should include

- sufficient space to enable the centre to expand
- controlled access in and out of the centre
- adequate parking
- good communications capabilities (consider concrete/steel and below-ground interference with two-way radios and cellular telephones)
- telephone system:
  - protection with priority access dialing
  - capability of expanding to 16 telephone lines for the REOC, MEOC, and COMOC
  - six lines for the Public and Media Inquiry Room (PMIR)
  - facsimile machines
    - one for each operations centre
    - one for PMIR
- auxiliary power supply
- operational display boards (blackboard, flip charts, white boards, etc.)
- facilities for news media briefings (near but separate from EOC room)
- adequate washroom facilities
- rest area

Supplies needed include:

- desks and/or tables
- chairs
- display boards
- filing cabinet(s)
- clock(s)
- computer(s) and printer
- local area and regional maps
- telephone books
- emergency operations plans
- resource inventories

Optional equipment and supplies include:

- television and VCR
- blank VCR tapes to record news reports
- projection screen or surface
- overhead projector and transparencies

- AM/FM radio
- weather radio
- aerial photos

3.5.2. Response Organizations

Moderate or high impact incidents in the upstream petroleum industry incident can involve a number of people and organizations from both the private and public sector. In most cases the response will be handled in the following manner:

- Upstream Operator – will establish the OSCP and is responsible for bringing the emergency incident under control. This is done in consultation with the EUB. The upstream operator takes charge of the technical aspects of the response along with all site operations dealing with the emergency.
- Local authority has the ultimate responsibility for public safety of individuals off-site, while the upstream operator is responsible for initiating and implementing public safety actions within the EPZ. The local authority and the upstream operator must conduct their response activities in a coordinated and effective manner.
- EUB – is the primary provincial government support agency for the response. Other government departments may also have mandated responsibilities associated with the incident but should coordinate all activities with the EUB until the response phase of the incident has concluded and public safety is no longer threatened.

3.5.3 Alert and Notification

Should this plan be activated, the organizations listed in Appendix I would be notified by Alberta Municipal Affairs, Emergency Management Alberta. Appendix I may also be used as a checklist so that specific tasks are not overlooked. Appendix J-1 and J-2 contain emergency telephone numbers and a map showing the EUB's Field Centre boundaries.

3.5.4 Liaison Officers

When this plan is activated, liaison officers will be required as indicated in Table 1. The liaison officers are to

- establish communication links between government departments and operations centres;
- provide information as requested to support the response;

- provide timely briefing or exchange of information from an operations centre or the site of the emergency to government departments;
- make known what provincial resources are available to support the response and to facilitate the request for these resources through the COMOC.

Table 1 – EPO, Liaison Officer, Representative Assignments					
From		To (when activated)			
		OSCP	MEOC	REOC	COMOC
Agriculture, Food & Rural Development (when requested)				X	X
EUB – Field Surveillance and Operations		X		L	L
EUB Communications		X		X	X
Environment		X		X	X
Human Resources & Employment-Workplace Safety		X			
Upstream Operator – Operations		L		X	
Upstream Operator – Communications				X	
Local Authority		X	L	X	
Municipal Affairs, Emergency Management Alberta (when requested)			X	X	C
Office of Critical Infrastructure & Emergency Preparedness (coordinates federal involvement through Municipal Affairs-Emergency Management Alberta)					C
Public Affairs Bureau					X
Regional Health Authority			X	X	
Sustainable Resource Development (When incident occurs in the "green area" or when requested.)				X	X

X – Liaison officer
L – Lead agency
C – Coordinating agency

3.5.5 Priorities

The priorities during an upstream petroleum incident are as follows:

- The upstream operator activates its site specific or corporate ERP. EUB in consultation with the upstream operator determines the level of the incident.
- When required, the upstream operator implements public protection actions.
- The upstream operator notifies the local police, local authority and the EUB.
- EUB activates this plan when warranted.
- Based upon the incident the MEOC, REOC, and COMOC may be activated.
- EUB dispatches personnel to help initiate and staff the REOC and area PMIR, when required (for some moderate level 2 and for high-impact level 3 emergencies).
- Liaison officers are dispatched upon the request of the EUB to the OSCP, REOC, MEOC, and COMOC. Liaison officers are sent to the MEOC upon the local authority's request. Again, it must be noted that it may not be necessary to activate all EOC locations.

3.5.6 Communications Access

Should problems be encountered while obtaining additional telecommunications capability for the MEOC or REOC, Municipal Affairs, Emergency Management Alberta should be notified. They will contact the Telus' Provincial Network Operations Centre in order to meet these emergency requirements.

4 SUPPORT

4.1 General. The following table provides a general overview of the support provided during a significant-moderate level 2 to high-impact level 3 incident.

<table>
<tr><th colspan="3">Table 2 – Operations and Operational Support Overview</th></tr>
<tr><th colspan="3">Upstream Operator</th></tr>
<tr><th>Internal</th><th>External</th><th>Government</th></tr>
<tr><td>Site/area emergency response/operations team and administration support</td><td rowspan="3">• Contractors
• Industry mutual assistance group
• Specialized contracted specialist (well control, oilfield fire fighting, etc.)</td><td rowspan="3">• EUB
• EUB Communications
• Local authority</td></tr>
<tr><td>Regional crisis team from regional headquarters</td></tr>
<tr><td>National headquarters resources</td></tr>
<tr><th colspan="3">EUB (primary provincial support agency)</th></tr>
<tr><th>Internal</th><th>External</th><th>Government</th></tr>
<tr><td>Field Centre staff</td><td rowspan="2">• Technical advisers
• Telus (telephones)
• Regional Health Authority</td><td>• Provincial departments and resources as required
• Public Affairs Bureau</td></tr>
<tr><td>Departmental staff</td><td>• Federal department resources as requested through Emergency Management Alberta</td></tr>
<tr><th colspan="3">Local Authority (lead agency for public safety)</th></tr>
<tr><th>Internal</th><th>External</th><th>Government</th></tr>
<tr><td>Emergency services
Municipal departments</td><td rowspan="2">• Mutual aid partners
• Regional Heath Authority
• Local hospitals
• NGOs</td><td rowspan="2">• Emergency Management Alberta
• EUB
• Provincial departments and resources as required
• Federal department resources as requested through Emergency Management Alberta</td></tr>
<tr><td></td></tr>
</table>

5 Control, Coordination, and Communications

5.1 Control. During an emergency incident, the command and control of key operations is as follows:

- **OSCP** – The incident commander is the person or position so assigned in the upstream operator's ERP. Working closely with the EUB and the local authority, the incident commander directs on-site response activities to contain and control the emergency. Communications from the OSCP is to the Corporate Regional Emergency Operations Centre (CREOC) and the REOC.
- **Off-site REOC** – The upstream operator, local authority, regional health authority, and required provincial government departments work collaboratively to support the OSCP activities and to address issues that are too broad to be addressed by the OSCP. The EUB is the coordinating agency at the off-site REOC. The REOC coordinates response activities within the region of the emergency. A PMIR will be established at the off-site REOC. Timely SitReps and media releases are communicated to the COMOC (or Emergency Management Alberta, should the COMOC not be activated).
- **COMOC** – When the COMOC is activated, it is to support the activities of the off-site REOC and the local authority's MEOC. The COMOC has the capability of accessing provincial, federal, and other resources necessary to support the emergency response. It may also deal with broader issues that cannot be dealt with by, or would overburden the local authority and the off- site REOC. The COMOC keeps elected provincial officials informed through personal contact and briefing notes. The COMOC coordinator manages COMOC activities and works collaboratively with the EUB and others who have been requested to participate at the COMOC.

Note: In some instances the various EOC's may be combined and as a result not all the EOC's may be activated in these cases.

5.2 Contacts. Emergency telephone contacts are found in Appendix J-1.

5.3 Protocols. The upstream operator is responsible for immediate notification to the EUB and the local police when there is an upstream petroleum industry incident. It may also be responsible for other notifications under various pieces of legislation. The EUB notifies Municipal Affairs, Emergency Management Alberta to activate this plan. Emergency Management Alberta notifies the municipality and other government organizations, as outlined in this plan. Emergency

Management Alberta also notifies elected and nonelected government officials as required.

5.4 Log Keeping and Documentation. The keeping of organization logs and records is critical for the coordination of activities, and shift changes. The logs may also be accessed in follow-up debriefings and inquires. Incident logs indicate:

- date and time of the activity
- person making the entry
- contact person(s), title, and their location along with telephone number(s)
- weather conditions and wind direction at the site, when appropriate
- brief description of incident
- information provided
- notation of any follow up actions and who should take them

Logs may be kept in hard copy or in electronic format. They must be maintained for a reasonable period of time (based upon regulatory requirements and/or company policy) and should be available for legal purposes.

Emergency Plan Compatibility

Emergency plans must be compatible and complementary to each other in order to maximize the resources available and to achieve the objectives in a timely manner to protect the public and property. Other government emergency response plans that interact with this plan are:

- **Municipal Emergency Plan (MEP)**
  The *Disaster Services Act* requires each local authority to be responsible for emergency response planning and for the direction and control of emergency response within their jurisdiction.
  Specific reference should be found in these plans to the industrial operator's plan for upstream petroleum industry facilities in the area. Both the industrial operator and the local authority have a responsibility to co-ordinate their respective plans and to exercise them with each other. The local authority plays a major role in the notification and evacuation of people outside the industrial operator's emergency planning zone (EPZ).
  Citizens who wish to learn more about their municipality's emergency preparedness are advised to contact their local authority or the Executive Director of Emergency Management Alberta.
- **Municipal Mutual Aid Agreements**
  Municipal mutual aid agreements may be found in the appendices of most municipal emergency plans (MEP).
- **Industrial Plans**
  Most large industrial organizations located in Alberta have both on-site and off-site (transportation related) emergency response plans. It is essential that these plans are compatible with the MEP and provincial government emergency plans.
  The upstream petroleum industry has a variety of emergency plans and they include: corporate level emergency plans, geographical area emergency response plans (ERPs) and site specific ERPs. All facilities and operations that are considered to be sour (hydrogen sulphide) or transport high vapour pressure products (HVP) must comply with EUB requirements and have approved EUB emergency plans.
- **Government of Alberta Support Plan for a Dangerous Goods Incident**
  This plan may come into play should an event involve the transportation of dangerous goods or any facility which is included in the *Transportation of Dangerous Goods* legislation.
- **School Plans**
  These two plans should be available through the individual school, the school district offices and/or the municipality. Both the School Board Disaster Plan and the School Disaster Plan will provide detailed information concerning the school actions in an emergency and will likely contain information concerning bus routes and their scheduling.
- **Hospital and Extended Care Facilities**
  These plans should be reviewed in order to determine what actions should be taken in the event of an upstream petroleum industry event both in terms of support to an event and/or to support them should they require it. These facilities

are difficult to evacuate and discussions should take place between the facility, local authority and the industrial operator to ensure a coordinated plan of action has been developed.

- **Day Care Centres**
  Day care centres also require adequate supervision and transportation should they be evacuated. Should they be located in a potential risk area, preparedness activities must be implemented for these centres.
- **Other Considerations**
  Other areas where preparedness activities should be reviewed include:
    - Large shopping malls
    - Recreation facilities
    - Other industrial operations within the area.

Definitions

"Ceiling – Recommended Exposure Limit" means the concentration that should not be exceeded during any part of the working exposure. An employee's exposure to a hazardous substance shall at no time exceed the ceiling value.

"Closure Order" means an order closing travel to an area to unauthorized personnel. The closure order area is that area within the boundaries described in an order issued by the EUB under Subsection 97(1) of the *Oil and Gas Conservation Act*.

"Company Emergency Response Plans (ERP)" means those plans prepared by an upstream operator under the *Oil and Gas Conservation Act*, *Pipeline Regulations Act* or any other Regulation, Statute, or Condition imposed by the EUB.

"Community" means the area beyond the industrial operator's property or right-of-way which is under the jurisdiction of a local authority and the public has unrestricted access.

"Coordination and Information Centre (CIC)" means the 7-24 hour information centre operated by Alberta Transportation. This Centre also serves as the after normal working hours contact point for Alberta Municipal Affairs, Emergency Management Alberta. It can be reached by dialing 422-9600 in the Edmonton area or 1-800-272-9600 anywhere else in Alberta.

"Condensates, Sour" means a complex liquid mixture of naturally occurring pentanes plus alkanes and hydrogen sulfide. The flammable limits in air by volume are: lower 1.05%, upper 7.8%.

"Condensates, Sweet" means a complex liquid mixture of naturally occurring pentanes plus alkanes. The flammable limits in air by volume are: lower 1.05%, upper 7.8%.

"Consequence Management Operations Centre (COMOC)" means the provincial Consequence Management Operations Centre that will have the necessary personnel; expertise, communications and facilities required for the coordination a provincial response.

"Corporate Regional Emergency Operations Centre (CREOC)" means the regional corporate centre that has been activated to support emergency response operations at the site of the incident.

"Critical Sour Gas Well" means a sour well from which the maximum potential release rate is:

1. 0.01 cubic metres per second (m^3/s) or greater and less than 0.1 m^3/s and which is located within 500 metres (m) of the corporate boundaries of an urban centre,
2. 0.1 m^3/s or greater and less than 0.3 m^3/s and which is located within 1.5 km of the corporate boundaries of an urban centre,

3. 0.3 m^3/s or greater and is less than 2.0 m^3/s and which is located within 5 km of the corporate boundaries of an urban centre, or
4. 2.0 m^3/s or greater.

"Crude Oil, Sour" means a complex and highly variable viscous liquid mixture of naturally occurring hydrocarbons and containing hydrogen sulfide. The typical flammable limits in air by volume are: lower 1.0%, upper 7.0%.

"Crude Oil, Sweet" means a complex and highly variable viscous liquid mixture of naturally occurring hydrocarbons. The typical flammable limits in air are: lower 1.0%, upper 7.0%.

"Disaster" means an event that results in serious harm to the safety, health or welfare of people or in widespread damage to property.

"Emergency" means a present or imminent event that requires prompt coordination of action or special regulation of persons or property to protect the health, safety or welfare of people or to limit damage to property.

"Emergency Awareness Zone (EAZ)" means the predefined area surrounding the emergency planning zone (EPZ) in which the public will be notified and provided with information or direction in relation to hazard(s) associated with sour gas or a high vapour pressure (HVP) facility.

"Emergency Operations Centre (EOC)" means an operations centre established in a suitable location to manage the larger aspects of the emergency. In a high impact emergency there may be a number of EOCs established to support the response. These may include corporate EOCs (regional, headquarters), municipal EOC, the joint off-site regional EOC and the provincial government COMOC.

"Emergency Planning Officer (EPO) " means a senior staff member of a government department who, amongst other duties, coordinates the functions to be discharged by the department in response to an emergency. May be requested to report to the COMOC.

"Emergency Planning Zone (EPZ)" means area surrounding a well, pipeline or other facility where residents and other members of the public would be at risk in the event of an uncontrolled release of toxic material such as H_2S, explosion or fire.

"Event" is associated with an incident either as the cause or a contributing cause of the incident or as a response to the initiating event. An event is the realization of a hazard or an occurrence involving equipment performance or human action external to the system that causes system upset.

"Field Butane" means a gas mixture under atmospheric conditions and a liquid when pressurized. It may contain N-Butane, isobutene and propane. The typical flammable limits in air by volume are: lower 1.8%, upper 8.4%.

"Government" means the Government of Alberta.

"Green Area" means the public lands as defined in the *Public Lands Act*. The primary public land use in the "green area" is for timber production, surface access for oil and gas activities, recreation, livestock grazing and sand and gravel extraction.

"High Vapour Pressure Products" means any product, which produces a vapour, pressure in excess of 340 kilopascals absolute at 38°C. Examples include ethylene, propane and butanes.

"Immediately Dangerous to Life or Health" means the value of a substance at which a worker could escape without injury or irreversible health effects from a 30 minute exposure to that substance.

"Incident" means an occurrence or event, either human-caused or natural phenomena, that requires action by emergency personnel to prevent or minimize loss of life or damage to property or the environment.

"Isobutane" means a gas mixture under atmospheric conditions and a liquid when pressurized. The typical flammable limits in air by volume are: lower 1.8%, upper 8.4%.

"Kick" means when there is a situation where the formation pressure exceeds the static pressure in the well bore allowing formation fluid to enter.

"Lead Agency" means the primary organizations that have regulated authority in relation to the upstream petroleum industry (EUB) and/or public safety and protection during an upstream petroleum industry incident.

"Lean Oil" means a petroleum liquid which may contain small amounts of N-Hexane and other isomers, benzene, toluene, xylene, cyclopentanes and 1,2,4 Trimethylbenzene. The typical flammable limits in air by volume are: lower 1.0%, upper 7.0%.

"Level 1 Low Impact Incident" means there is no danger outside the industrial operators property. There will be immediate control of the hazard and there is no threat to the public and minimal environmental impact. The situation can be handled entirely by the industrial operators personnel. There is little or no media interest.

"Level 2 Moderate Impact Incident" means there is no immediate danger outside of company property or the right-of-way but where there is the potential for the emergency to extend beyond the operator's property. Outside and provincial agencies must be notified. Imminent control of the hazard is probable but there is moderate threat to the public and/or the environment. There may be local and regional media interest in the event.

"Level 3 High Impact Incident" means that the safety of the public is in jeopardy from a major uncontrolled hazard. There are likely significant and on-going environmental

impacts. Immediate multi-agency municipal and provincial government involvement is required.

"Liaison Officer" means a person who is the point of contact for assisting or coordinating an organization's resources during a response. They are often located at the OSCP, MEOC or REOC.

"Local Authority" as defined in the *Disaster Services Act* means:

(i) the council of a city, town, village, or municipal district;
(ii) in the case of an improvement district or special area, the Minister of Municipal Affairs;
(iii) the settlement council of a settlement under the Metis Settlement Act;
(iv) the park superintendent of a national park or his delegate where an agreement has been entered into with the Government of Canada under section 6(B) [of the Act] in which it is agreed that the park superintendent is a local authority of the Act; or
(v) the band council of an Indian band where an Agreement is entered into with the Government of Canada under section 6(b) [of the Act] in which it is agreed that the band council is a local authority for the purposes of the Act.

"Lethal Concentration, 50% (LC_{50})" means the amount of a toxicant in the air that is deadly to 50% of the exposed lab animal population within a specified time.

"Lower Explosive Limit" means the lowest concentration of gas or vapour (% by volume in air) that burns or explodes if an ignition source is present at ambient temperatures.

"Minister" means the Minister charged with the administration of the *Disaster Services Act*.

"Municipal Emergency Operations Centre (MEOC)" means the centre from which responsible municipal officials manage and support emergency operations within their jurisdiction. They also formulate protective actions and provide public information. The centre has adequate workspace, maps, status boards, and communications capability.

"Municipal Emergency Plan (MEP)" means the emergency plan of the local authority required under section 8 of the *Disaster Services Act*.

"N-Butane" means a gas under normal atmospheric conditions and a liquid under pressure. The typical flammable limits in air by volume are: lower 1.9%, upper 8.5%.

"NG Liquids" means a gas under normal atmospheric conditions and a liquid under pressure. It consists of ethane, propane, butane and carbon dioxide. The typical flammable limits in air by volume are: lower 3.2%, upper 12.5%.

"NG Liquids C_2+ " means a natural gas liquid, which contains ethane, propane, butane, pentanes C_5+ and carbon dioxide. The typical flammable limits in air by volume are: lower 3.2%, upper 12.5%.

"NG Liquids C_3+ " means a natural gas liquid, which contains propane, butane, pentanes C_5+ and carbon dioxide. The typical flammable limits in air by volume are: lower 2.1%, upper 9.5%.

"Non Governmental Organization (NGO)" means any agency apart from government that has the skills and resources to prepare for, respond to or provide assistance in the recovery from a disaster.

"NOTAM (notice to airmen)" means an order issued by Transport Canada to close a specific airspace to unauthorized commercial aviation. The dimension of the airspace described is issued by Transport Canada.

"On-Site Command Post (OSCP)" means an operations centre established in the immediate vicinity of the incident to provide immediate and direct response to the emergency. The operator's staff will initially man it.

"Parts Per Million" means the unit for measuring the concentration of a particular substance equal to one (1) unit combined with 999,999 other units.

"Permissible Exposure Limits" means the Total Weighted Average (TWA) that must be exceeded for a worker in an 8-hour work shift or a 40-hour workweek.

"Protective Actions" means the actions directed or conducted by a person in authority in order to protect the life and health of the public. They include: evacuation, in-place sheltering or ignition.

"Public and Media Inquiry Room (PMIR)" means a room located near the Emergency Operations Centre to receive and respond to inquiries from the public and the news media. Government and/or industry personnel staff the PMIR.

"Recommended Exposure Limit" means the highest allowable airborne concentration that is not expected to injure a worker. It may be expressed as a ceiling limit or as a time-weighted average (TWA), usually for a work shift.

"Regional Emergency Operations Centre (REOC)" means an operations centre established in a suitable location off-site near the emergency to manage the larger aspects of the emergency response, and is manned jointly by government and industry staff.

"Representative" means a person who represents a public or private sector organization.

"Sales Gas" means a gas that is mainly methane.

"Short-Term Exposure Limit" means a 15-minute total weighted average (TWA) exposure that should not be exceeded by a worker at any time.

"Significant Moderate Level Impact Event" means an upstream petroleum incident that will likely be raised to a High Level Impact Event because there is concern for public safety, the event is expected to be of long duration (over 7-days) and there will be the interruption of normal activities in a community.

"Sour Gas" means:

- in a pipeline it is natural gas containing more than 1% hydrogen sulphide
- under workers safety regulations it is defined as a natural gas that contains more than 0.001% (10 PPM)

"State of Emergency" means a declaration made by the Lieutenant Governor in Council, under section 15 of the *Disaster Services Act*, providing the necessary authority, resources, and procedures to allow an emergency to be resolved effectively and efficiently.

"State of Local Emergency" means a declaration by a local authority under section 18 of the *Disaster Services Act*, providing the necessary authority, resources, and procedures at the municipal level to allow an emergency to be resolved effectively and efficiently.

"Threshold Limit Value - Total Weighted Average" means the allowable time-weighted average concentration of a substance that a healthy worker may be exposed to during a normal 8-hour workday or 40-hour week.

"Upper Explosive Limit" means the highest concentration of a vapour or gas that will explode, ignite or burn in the presence of an ignition source. Mixtures above this limit are too rich to burn. UELs are expressed in percent vapour or gas in the air by volume; one percent equals 10,000 ppm.

"Upstream Operator" means the person who has the charge, management, or control of a site containing an upstream petroleum industry facility or a corporate person designated as responsible for corporate response activities in an incident.

"Upstream Operator's Emergency Response Plan" see "Company Emergency Response Plan".

"Upstream Petroleum Industry" constitutes all facilities, equipment, substances, and operations used in the exploration, recovery, processing, and transporting petroleum within Alberta Energy & Utilities Board's (EUB) jurisdiction. Generally, this would include oil and gas operations upstream of a refinery and the storage and transportation of unrefined products by pipeline between oil and gas production facilities or other end points.

"Upstream Petroleum Industry Incident" means any uncontrolled releases from wells, storage facilities, petroleum processing facilities, hydrocarbon pipelines and transport vehicles including saltwater spills or any emergency situation which has the potential to threaten the public, or to create a serious and negative environmental impact. In this document the word "event" means the same as "incident".

"Urban Centre" means a city, town, new town, village, summer village, hamlet with not less than 50 separate buildings each which must be occupied dwelling, or other incorporated centre, or any similar development the EUB may designate as an urban centre.

Acronyms

CIC	=	**C**oordination and **I**nformation **C**entre
COMOC	=	Emergency Management Alberta's **CO**nsequence **M**anagement **O**perations **C**entre
C-REL	=	**C**eiling - **R**ecommended **E**xposure **L**imit
CREOC	=	**C**orporate **R**egional **E**mergency **O**perations **C**entre
EAZ	=	**E**mergency **A**wareness **Z**one
EOC	=	**E**mergency **O**perations **C**entre
EPO	=	**E**mergency **P**lanning **O**fficer
ERP	=	**E**mergency **R**esponse **P**lan
EPZ	=	**E**mergency **P**lanning **Z**one
EUB	=	**E**nergy and **U**tilities **B**oard
HVP	=	**H**igh **V**apour **P**ressure Products
IDLH	=	**I**mmediately **D**angerous to **L**ife or **H**ealth Concentrations
LC_{50}	=	**L**ethal **C**oncentration **50**%
LEL	=	**L**ower **E**xplosive **L**imit
LO	=	**L**iaison **O**fficer
MEOC	=	**M**unicipal **E**mergency **O**perations **C**entre
MEP	=	**M**unicipal **E**mergency **P**lan
MOU	=	**M**emorandum **o**f **U**nderstanding
NGLs	=	**N**atural **G**as **L**iquid**s**
NGO	=	**N**on **G**overnmental **O**rganization
NOTAM	=	**N**otice **to** **A**irmen

OSCP	=	**O**n-Site **C**ommand **P**ost
PEL	=	**P**ermissible **E**xposure **L**imit
PPM	=	**P**arts **P**er **M**illion
REL	=	**R**ecommended **E**xposure **L**imit
REOC	=	**R**egional **E**mergency **O**perations **C**entre
PMIR	=	**P**ublic and **M**edia **I**nquiry **R**oom
SITREP	=	**Si**tuation **Rep**ort
STEL	=	**S**hort-**T**erm **E**xposure **L**imit
TSBC	=	**T**ransportation **S**afety **B**oard of **C**anada
TLV - TWA	=	**T**hreshold **L**imit **V**alue – **T**otal **W**eighted **A**verage
UEL	=	**U**pper **E**xplosive **L**imit

Table 1 – Hazards and Hazard Information

Hazard	Substance	Detail Information	Where Found
Toxicity	Hydrogen Sulphide (H_2S)	*Route of Exposure:* Inhalation. *Physical Dangers:* Gas is heavier than air and may travel along the ground and settle in low areas. Distant ignition is possible. *Chemical Dangers:* Decomposes when burned to produce the toxic gas sulfur dioxide and other combustion by-products. *Physical Properties:* Colorless gas that smells like rotten eggs. May deaden sense of smell rapidly. *Flammable Range:* UEL = 44%. LEL = 04%. *Health Information:* Exposure at: • .02-.03ppm minimum concentration one can smell. • 1-5ppm moderate to strong odor. Some may experience nausea, tearing of the eyes, headaches, and loss of sleep after prolonged exposure. • 10ppm symptoms above may increase or persist. • 20+ppm can increase lung and eye irritation. A loss of appetite after prolonged exposure. *Health Information: EUB Requirements* • At 1-5 ppm – If any individual is experiencing any symptoms they should consider leaving the area. Authorities may advise persons with hypersensitivities to leave the area. • At 10 ppm for 8 hours or more, individual(s) may be requested to leave the area until the levels are reduced. • At 20 ppm and above for a 3 minute average, mandatory evacuation of all individuals(s) will be carried out. *Occupational Exposure Notes:* • IDLH: 100 ppm. • TLV: 10 ppm; 14 mg/m^3 (as TWA); 15 ppm; 21 mg/m^3 (STEL) (ACGIH 1997).	At some: - Wells - Oil well batteries - Gas plants - Pipelines - Tank trucks - Rail tank cars -Manufacturing sites

Table 1 – Hazards and Hazard Information			
Hazard	**Substance**	**Detail Information**	**Where Found**
		Public Protection Information. • Less than 10 ppm, voluntary evacuation of the more susceptible individuals. • If average level exceed 10 ppm for 8-hours or more, the public may be advised to leave the area until levels are reduced. • At 20 or more ppm and conditions indicate a serious hazard exists mandatory evacuations will be carried out.	

Hazard	Substance	Detail Information	Where Found
Toxicity and/or Asphyxiation	Sulphur Dioxide (SO_2)	*Route of Exposure:* Inhalation. *Physical / Chemical Dangers:* Sour gas may be ignited to reduce the risk to the public from H_2S. The burning of sour gas produces Sulphur dioxide and other combustion byproducts (that are listed individually following). Depending on the concentration and length of exposure, SO_2 can be considered to be a toxic gas. It is a colorless gas, less odorous than H_2S but does have a pungent smell similar to a burning match. *Flammable Range*: N/A. *Health Information:* Exposure at: • At 0.34ppm prevents taste or smell after 1 hour exposure. May be a discomfort to sensitive individuals • >0.4ppm asthmatics experience increased resistance to airflow • >1ppm – Irritates the eyes and respiratory tract • Inhalation of the gas may cause lung oedema • High exposure levels may result in death. *Health Information*: EUB Requirements • 0.3ppm for 24 hour average immediate evacuation must take place of the impacted area • 1ppm for 3 hour average immediate evacuation must take place of the impacted area • 5 ppm for 15 minute average immediate evacuation must take place of the impacted area *Occupational Exposure Notes:* • IDLH: 100 ppm. TLV: 2 ppm; 5.2 mg/m^3 (as TWA); 5 ppm; 13 mg/m^3 (STEL) (ACGIH 1992-93).	
Hazard	**Substance**	**Detail Information**	**Where Found**
Toxicity and/or Asphyxiation	Carbon Disulfide (CS_2)	*Route of Exposure:* Inhalation, skin absorption or ingestion. *Physical / Chemical Dangers:* CS_2 is produced in small quantities when sour gas is burned. It may condense in the form of a mist or in pools near the source of the release. It is a colourless to faint yellow liquid and has a sweet ether-like smell. *Flammable Range:*	

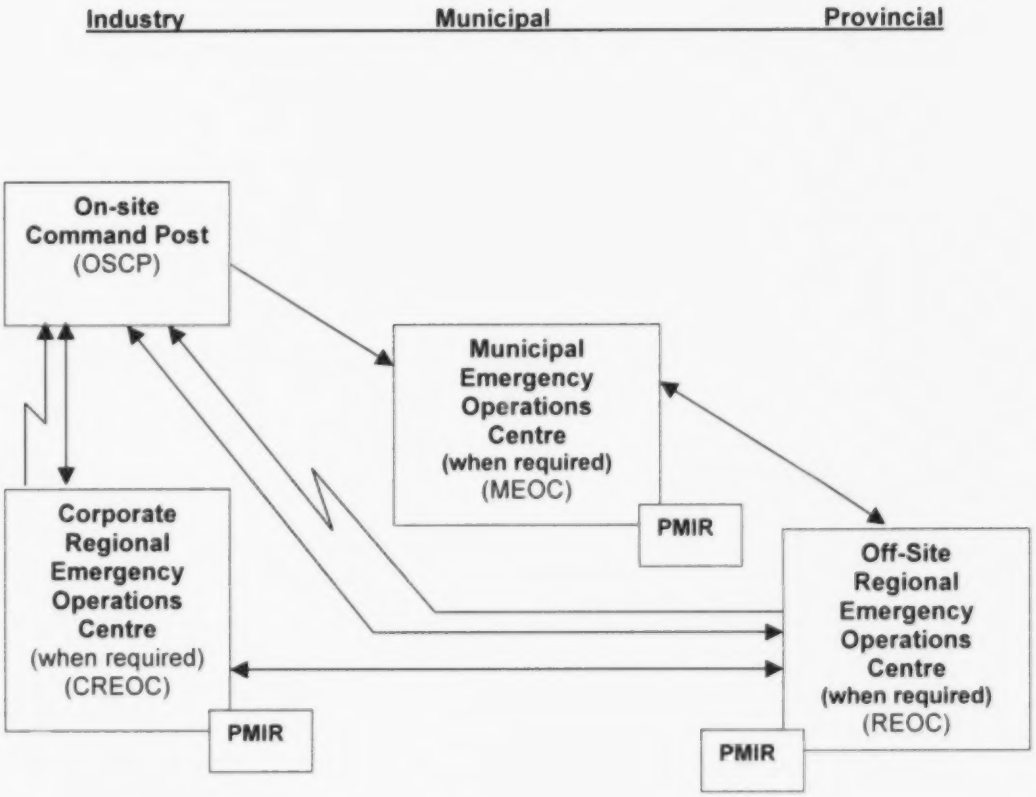
		UEL = 50%. LEL = 1.3%. *Health Information:* • Irritates the eyes, skin and respiratory tract. • Ingestion may cause aspiration into the lungs resulting in the risk of chemical pneumonitis. • May cause effects on the central nervous system. *Occupational Exposure Notes:* • IDLH = 500 ppm. • TLV: 10 ppm; 31 mg/m^3 as TWA (skin); (ACGIH 1992-93).	

Hazard	Substance	Detail Information	Where Found
Toxicity and/or Asphyxiation	Carbonyl Sulphide (COS)	*Route of Exposure:* Inhalation. *Physical / Chemical Dangers:* COS is an inorganic colourless, flammable gas heavier than air. It has a distinct odour. It can be produced through the thermal decomposition of H_2S. *Flammable Range:* LEL = 12% UFL = 29% *Health Information:* If a sufficient quantity of this gas is inhaled it may cause respiratory tract irritation, skin irritation, eye irritation and central nervous system depression. *Occupational Exposure Notes:* None set to date. *Toxicity Data:* 1070 ppm/4-hours – inhalation (rat) LC_{50}.	
Hazard	**Group of Substances**	**Detail Information**	**Where Found**
Toxicity and/or Asphyxiation	Nitrogen Oxides (NO_X)	*Physical / Chemical Dangers:* Nitrogen gas, normally relatively inert (unreactive), comprises about 80% of the air. At high temperatures and under certain other conditions it can combine with oxygen in the air, forming several different gaseous compounds collectively called oxides of nitrogen (NO_x). Nitric oxide (NO) and nitrogen dioxide (NO_2 - the criteria pollutant) are the two most important. *Health Information:* Certain members of this group of pollutants, especially nitrogen dioxide (NO_2), are known to be highly toxic to various animals as well as to humans. High levels may be fatal, while lower levels affect the delicate structure of lung tissue. In experimental animals this leads to a lung disease that resembles emphysema in humans. Humans exposed to high concentrations suffer lung irritation and potentially lung damage. Increased respiratory disease has been associated with lower level exposures. The human health effects of exposure to nitrogen oxides, such as nitrogen dioxide, are similar to those of ozone. These effects may include: • Short-term exposure at concentrations greater than 3 parts per million (ppm) can measurably decrease lung function. • Concentrations less than 3 ppm can irritate lungs. • Concentrations as low as 0.1 ppm cause lung irritation and measurable decreases in lung function in asthmatics. • Long-term lower level exposures can destroy lung tissue, leading to emphysema. Children may also be especially sensitive to the effects of nitrogen oxides.	

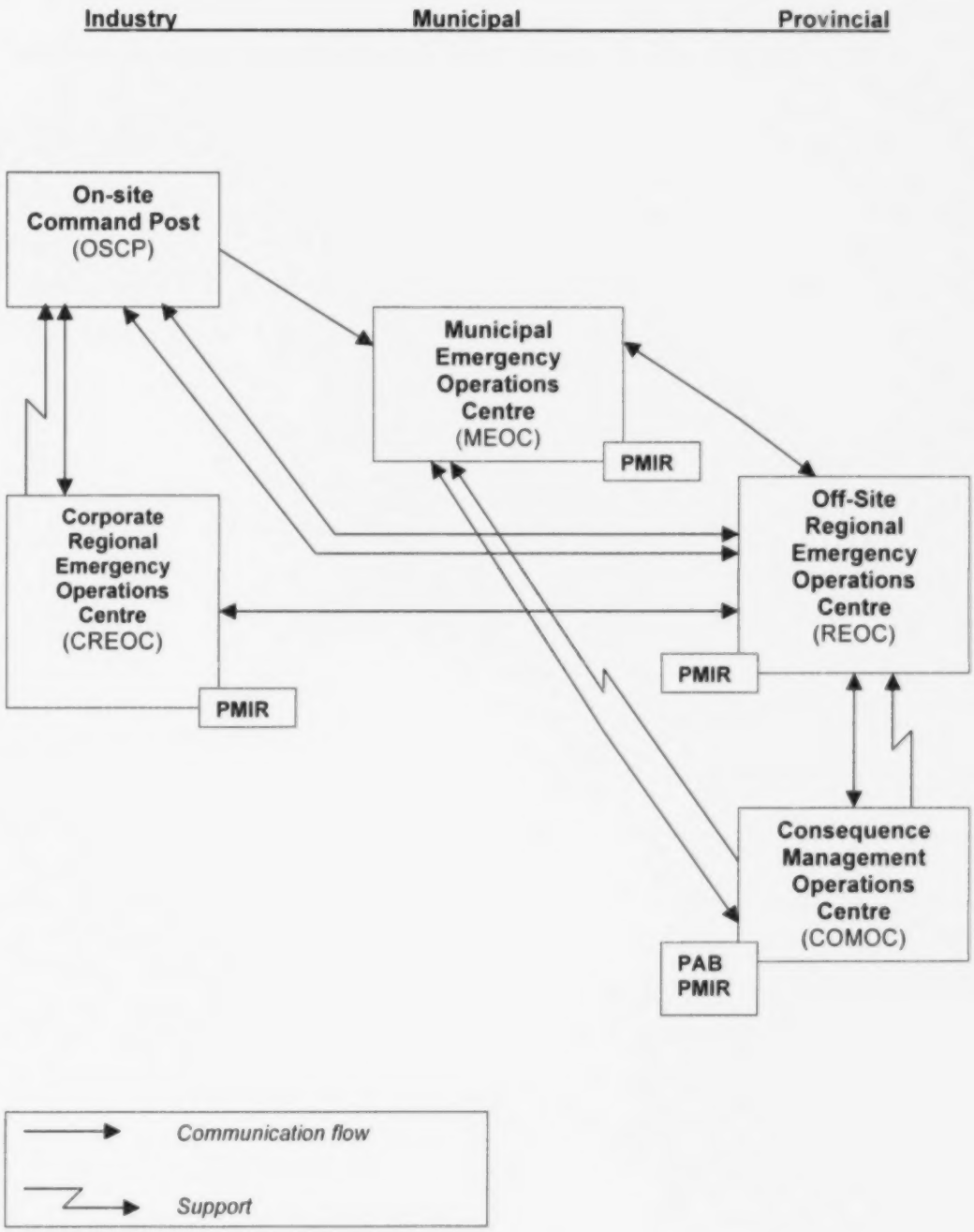
Hazard	Group of Substances	Detail Information	Where Found
Toxicity and/or Asphyxiation	Volatile Organic Compounds (VOCs)	*Route of Exposure*: Inhalation. *Physical / Chemical Dangers*: Inefficient combustion of hydrocarbons may produce VOCs such as benzene, toluene and xylene. Their vapours are heavier than air and are flammable. *Health Information*: Eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans.	
Hazard	**Group of Substances**	**Detail Information**	**Where Found**
High pressure	Hydrocarbons	Natural gas and HVP products are transported and stored under high pressures.	- Pipelines - Tank trucks - Rail cars - Storage tanks
Hazard	**Group of Substances**	**Detail Information**	**Where Found**
Over pressure waves	Hydrocarbons	Over pressure waves are usually a result when there is instantaneous ignition or an explosion of a vessel, pipeline, vapour cloud or equipment containing high vapour pressure products. Sometimes referred to as blast waves.	- Storage vessels - Pipelines - Transport equipment - Compressors
Hazard	**Group of Substances**	**Detail Information**	**Where Found**
Projectiles	Hydrocarbons	Can occur when a pressure vessel or a pipeline fails or explodes.	Same as above
Hazard	**Group of Substances**	**Detail Information**	**Where Found**
Flammability	Hydrocarbons	Natural gas, high vapour petroleum products are highly flammable. Other upstream hydrocarbons are flammable.	All upstream locations

Hazard	Group of Substances	Detail Information	Where Found
Other hazards (health, environmental)	Salt water and other wastes	These products are found in the upstream petroleum industry. If spilled or improperly disposed of represent a significant threat to the environment.	All upstream locations
(forest fires)	Hydrocarbons	May be started from the release of hydrocarbons which are ignited in woody materials, grasses and shrubs.	At some upstream locations

Response Structure
Level 2 Moderate Impact – Communications and Support



Response Structure
Level 3 High Level of Impact – Communications and Support



Event Information Gathering Form

Caller Information

Name of Caller:
Position: Date and Time:
Location:
Call Back Telephone Number(s):

Event Specific Information

Type of Emergency and Details:
Incident Location: **DLS** _____ - _____ - _____ - _____ **W** _____ **M** Generic Directions:
Product(s) Being Released:
Any Injuries: Details:
What is at Risk: Wind Direction:
Name of Operator: Has the Emergency Plan been Activated? Any Evacuations? Is the Air Being Monitored? Readings:
Level of Impact: ❑ **Level 3 High Impact** ❑ **Level 2 Moderate Impact** ❑ **Level 1 Low Impact**

Others Contacted

- ❑ **Upstream Operator**
- ❑ **Local Police**
- ❑ **Local Authority**
- ❑ **Energy and Utilities Board**
- ❑ **Municipal Affairs, Emergency Management Alberta**
- ❑ **Environment**
- ❑ **Human Resources and Employment – Workplace Health and Safety**
- ❑ **Sustainable Resource Development**
- ❑ **Transportation**
- ❑ **Regional Health Authority**
- ❑ **Other(s)**

Person completing this form	**Time and Date**

This is a sample form.

Tasks Matrix – Alberta Environment

Before the Event		
✓	**Task**	**Notes**
	Prepared to assist the EUB with response to upstream petroleum industry incidents.	
	Reviews and recommends changes to this plan.	
	Participates in testing of this plan when it is exercised.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Maintains the capability of sending an emergency planning officer (EPO) to the COMOC on a 7/24-hour basis.	
	Maintains 7/24-hour emergency contact numbers where resources can be accessed to carry out a response related to this plan.	

During the Event		
✓	**Task**	**Notes**
	If notified of an upstream emergency, informs the EUB and Alberta Municipal Affairs – Emergency Management Alberta of the incident.	
	Provides representation to the OSCP on a 7/24-hour basis, when requested.	
	Provides representation to the off-site REOC when established on a 7/24-hour basis, when requested.	
	Provides oversight role in ensuring air monitoring needs and activities associated with public safety around the event site are adequately addressed by the proponent.	
	Ensures the proponent is maintaining the air-monitoring log.	
	Participates in the evaluation of potential area at risk from product releases.	
	Provides assistance in monitoring discharges and ensuring appropriate mitigation actions are taken to reduce the impact of liquid releases for land based spills and to ensure watercourses are protected.	
	Sends an emergency planning officer (EPO) to the COMOC, when requested by Alberta Municipal Affairs, Emergency Management Alberta.	

After the Event		
✓	**Task**	**Notes**
	Compiles and maintains environment related records and log.	
	May request a review environmental impact assessment.	
	Carries out investigation, when required, having regard for the existing investigative protocols and procedures.	
	Monitors environmental recovery, when required.	
	Participates in event debriefings having regard for any ongoing investigation.	
	Investigates non-compliance with the Environmental Protection and Enhancement Act and the Water Act. The investigation may be coordinated with, or independent of any other investigation in relation to the incident.	

Tasks Matrix – Alberta Energy and Utilities Board

Before the Event		
✓	Task	Notes
	Acts as lead provincial government support organization in upstream petroleum industry emergency responses.	
	Reviews and approves regulated site-specific emergency plans.	
	Participates in site-specific plan exercises.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Reviews and recommends changes to this plan.	
	Participates in the validations and testing of this plan.	
	Maintains a 7/24-hour telephone contact where upstream petroleum incidents can be reported.	
	Conducts emergency preparedness audits of upstream operators emergency response plans.	
	Maintains the capability of sending an emergency planning officer (EPO) to the COMOC on a 7/24-hour basis.	
	Assesses upstream operators' response capability.	
	Maintains 7/24-hour emergency contact numbers where resources can be accessed to carry out a response to this plan.	

During the Event		
✓	Task	Notes
	Receives 7/24-hour notifications of emergency notifications.	
	Through consultation with the upstream operator determines the level of impact of an incident.	
	Dispatches EUB representative to the site of the incident, as required.	
	Confirms or requests initial local or provincial resources required to respond to the emergency. Notifies Alberta Municipal Affairs, Emergency Management Alberta. Additional requests for provincial/federal response resources may be made through Alberta Municipal Affairs, Emergency Management Alberta.	
	Activates this plan, when required.	
	Confirm or implement public safety actions taken to ensure the safety of the public and property.	
	Provide Situation Reports to Alberta Municipal Affairs, Emergency Management Alberta on a timely basis.	
	Send an EUB representative to the OSCP.	
	Establish an off-site REOC or request the activation of the COMOC to serve this function until the REOC is operational.	

During the Event		
✓	**Task**	**Notes**
	Dispatches staff to open and operate the off-site REOC.	
	Establishes the off-site REOC PMIR, as required.	
	Requests the deployment of other provincial government department staff members to be sent to the off-site REOC.	
	Requests a local authority liaison officer to work at the off-site REOC.	
	Provides, in conjunction with the industrial operator, timely situation reports (SitReps) to partners activated by this plan and issues timely news media releases.	
	Requests Alberta Municipal Affairs, Emergency Management Alberta to partially or fully activate the COMOC should provincial coordination or provincial resources be required.	
	Recommends the closure of the COMOC.	
	Notify all participants when the event has concluded and there is no longer any hazard to the public.	

After the Event		
✓	**Task**	**Notes**
	Carry out investigations.	
	Follow Incident Response & Reporting Protocols.	
	Recommend any mitigative actions that may reduce the event from re-occurring.	
	Address community concerns.	

Tasks Matrix – Human Resources and Employment – Workplace Health and Safety

Before the Event		
✓	**Task**	**Notes**
	Prepared to assist the EUB with response to upstream petroleum industry incidents.	
	Reviews and recommends changes to this plan.	
	Participates in testing of this plan when it is exercised.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Maintains the capability of sending an emergency planning officer (EPO) to the COMOC on a 7/24-hour basis.	
	Maintains 7/24-hour emergency contact numbers where resources can be accessed to carry out a response related to this plan.	

During the Event		
✓	**Task**	**Notes**
	If notified directly by the upstream operator of an upstream emergency, informs the EUB.	
	Provides a liaison officer to the REOC or an EPO to the COMOC, when requested.	
	Monitors the health and safety aspects of applicable occupations within the hazard area to ensure that the necessary precautions are taken to protect the workers' safety.	

After the Event		
✓	**Task**	**Notes**
	Compiles and maintains health and safety related records and log.	
	Carries out investigation, when required.	
	Determine the site is safe for recovery workers.	
	Participates in event debriefings.	
	Investigates non-compliance with the Occupational Health and Safety Act. The investigation may be coordinated with, or independent of, any other investigation in relation to the incident.	

Tasks Matrix – Upstream Operator

Before the Event		
✓	Task	Notes
	Consults with local authority regarding the development of the site-specific emergency response plan and the coordination of response resources.	
	Develop and maintain an emergency notification list that contains internal and external organizations on a 7/24 hours basis.	
	Develop the organization specific / site-specific emergency response plan.	
	Trains personnel to carry out function as assigned by their emergency plan or procedures	
	Exercises the emergency response plan.	
	Maintains the emergency response plan.	
	Communicate emergency plan updates and exercise results with EUB and local authority.	
	Maintains a 7/24-hour emergency contact number.	

During the Event		
✓	Task	Notes
	Notifies the EUB and the local authority of an emergency incident.	
	Completes notifications required by all applicable legislation.	
	Activates the site-specific emergency response plan.	
	Responds to the incident.	
	Sizes up the incident and determines the level of impact.	
	Set security perimeter as required.	
	Communicates the level of impact to the EUB and the local authority (for some moderate or high impact events continues down on with this list).	
	Initiates actions to control or contain the incident.	
	Initiates public protective actions as necessary.	
	Establishes an on-site command post.	
	Mobilizes resources to mitigate the event.	
	Provides situation reports (SitReps) on a timely basis and sends them to the EUB.	
	Develops an action plan to mitigate the event.	
	Develops a site safety response plan.	
	Communicates with the public and the media on a timely basis.	
	Brings the event under control.	
	Communicates that the response has terminated.	

After the Event		
✓	Task	Notes
	Conduct a damage assessment.	
	Develop a recovery plan.	
	Initiate recovery operation.	
	Conduct an organizational review of the response.	
	Complete and deliver all reports required by provincial or federal legislation.	
	Identify the causes of the event and carry out any mitigative actions that would reduce any future events of this type.	
	Participate in any multi-agency and/or public review of the response.	
	Update site specific and corporate emergency plans, as required.	
	Test the updated emergency plan through an exercise.	
	Communicate emergency plan update to all plan holders.	

Tasks Matrix – Local Authority

Before the Event		
✓	Task	Notes
	Conduct a hazard assessment of upstream petroleum facilities and operations.	
	Work with the upstream operator to effectively prepare for an upstream petroleum industry incident. Provide input to the industrial operators site-specific plan to ensure it is compatible with the municipal emergency plan (MEP).	
	Include preparedness and response information concerning upstream facilities and operations in the Municipal Emergency Plan.	
	Train personnel to carry out function as assigned by the municipal emergency plan or procedures.	

During the Event		
✓	Task	Notes
	If notified of an upstream emergency, inform the EUB and Alberta Municipal Affairs, Emergency Management Alberta of the incident.	
	Respond and assess emergency incident.	
	Activate the emergency public warning system to alert people to life threatening hazards, as required.	
	Initiate public protection option, as required.	
	Establish and maintain communications with industrial operator during emergency.	
	Activate the municipal emergency plan MEP, when required.	
	Manage the local authority's emergency response.	
	Dispatch a representative to the off-site REOC, when established to coordinate the response.	
	Activate the municipal EOC, as required.	
	Coordinate with the industrial operator, the establishment and the administration of reception centres for evacuees, as required.	
	Assist with the establishment of roadblocks and maintain them.	
	Assist with fire protection.	
	Provide emergency medical assistance, as required.	
	If necessary, declare a local state of emergency.	
	Establish a public information service, including the use of the news media to inform and instruct the public of the emergency and of any protective actions to be taken.	
	Provide timely news releases.	
	Inform Municipal Affairs, Emergency Management Alberta and the public when the emergency is over.	

After the Event		
✓	Task	Notes
	Conduct a damage assessment.	
	Compile a municipal log.	
	Properly shut down EOC.	
	Conduct municipal incident debriefing.	
	Participate in multi agency debriefings.	
	Review and updates the municipal emergency plan.	
	Communicate any changes to the plan to all plan holders.	
	Tracks costs associated with the response.	

Tasks Matrix – Local Authority –Emergency Services

Before the Event		
✓	Task	Notes
	Understand the hazards associated with the upstream petroleum facilities and operations within the area.	
	Work with the upstream operator to effectively prepare for an upstream petroleum industry incident.	
	Understand the response role when there is a private and public sector response.	
	Train personnel to carry out their functions when there is an upstream incident.	

Upon the Notification of an Upstream Incident		
✓	Task	Notes
	Prior to dispatching staff to scene contact the nearest EUB Field Centre to determine the hazards associated with the incident and other incident information.	
	Establish contact with the industrial operator in order to: • Obtain additional hazard information • Determine where road blocks should be or are established • Determine the direction of approach to the incident • Determine if there are injuries • Find out what response and public protection actions have been taken by the upstream operation • Identify what resources are required and where they should be staged • The location of the OSCP and any EOCs.	

During the Event		
✓	Task	Notes
	Respond and assess emergency incident.	
	Establishes a unified OSCP.	
	Communicate to MEOC and provide situation reports as required.	
	Initiate public protection option, when necessary.	
	Dispatches a representative to the off-site REOC, when it is established to coordinate the response.	
	Maintains roadblocks as necessary.	
	Assists with fire protection.	
	Provides emergency medical assistance, as required.	
	Provide timely news releases.	
	Inform Municipal Affairs, Emergency Management Alberta and the public when the emergency is over.	

After the Event		
✓	Task	Notes
	Conduct a damage assessment.	
	Compile response logs.	
	Participate in municipal incident debriefing.	
	Participates in multi agency debriefings.	

Tasks Matrix – Emergency Management Alberta

Before the Event		
✓	Task	Notes / Time / Date
	Prepared to assist the EUB with responses to upstream petroleum industry incidents.	
	Develops and maintains this plan.	
	Reviews this plan bi-annually.	
	Makes the plan available to stakeholders.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Tests the plan through an exercise.	
	Communicates changes to the plan with plan holders.	
	Maintains 7/24-hour emergency contact numbers.	
	Maintains 7/24-hour duty manager system.	
	Maintains COMOC readiness.	
	Activates COMOC within 20-minutes of notification.	

During the Event		
✓	Task	Notes
	If notified of an upstream emergency, informs the EUB, Alberta Environment and the local authority of the notification.	
	Upon notification of an emergency event of moderate (level 2) or high (level 3) impact completes the provincial government notification and call down as shown in Appendix I- Government Notification and Call Down System Diagram.	
	The Emergency Management Alberta duty manager obtains a SitRep from the EUB, industrial operator or the local authority and confirms the level of impact.	
	The duty manager notifies the appropriate provincial officials as per operating procedures.	
	Prepares briefing note, as appropriate.	
	When requested by the local authority, dispatches Emergency Management Alberta district officer (liaison officer) to the municipal EOC.	
	When requested, activates the COMOC for the EUB to use as the off-site REOC until the REOC is established near the event site.	
	Upon request from the EUB, dispatches a Emergency Management Alberta representative to the REOC near the event site.	
	Upon request of the EUB or the local authority, partially activates or activates the COMOC to coordinate and support response activities to the event with provincial resources.	
	Upon request by the EUB, partially activates or activates the PMIR to support and coordinate public and media information.	

During the Event		
✓	**Task**	**Notes**
	Provides ongoing SitReps or briefing notes to appropriate provincial officials.	
	Notifies plan holders when the event is over.	

After the Event		
✓	**Task**	**Notes**
	Debriefs COMOC participants.	
	Compiles COMOC log.	
	Properly shuts down COMOC.	
	Participates in event debriefings.	
	Reviews and updates this plan.	
	Communicates any changes to the plan to all plan holders.	
	Completes report in relation to the activation of this plan and the incident.	

Tasks Matrix – Regional Health Authority

Before the Event		
✓	Task	Notes
	Prepared to assist the EUB with response to upstream petroleum industry incidents.	
	Reviews and recommends changes to this plan.	
	Participates in testing of this plan when it is exercised.	
	Maintains current health related information for upstream products.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Maintains 7/24-hour emergency contact numbers where resources can be accessed to carry out a response related to this plan.	

During the Event		
✓	Task	Notes
	Provides representation at the off-site REOC when it is established or as requested.	
	Provides health related information about toxic chemicals and by-products.	
	Provides accurate information to the public concerning the incident.	
	Establishes health and safety information for product releases.	
	Monitors the health effects resulting from the event and ensures appropriate data is collected and maintained.	
	Investigates health complaints from the public.	
	Provides advice to the COMOC and to the REOC on the existing or potential health effects associated with the incident.	
	Provides health advice and safety levels for any health or special care facilities and for other persons that are likely to be sensitive from the impact as a result of the incident.	
	Ensures local hospitals are alerted when there is potential for an impact from a release.	

After the Event		
✓	Task	Notes
	Compiles and maintains health related records and log.	
	Participates in event debriefings.	
	Completes incident related reports.	

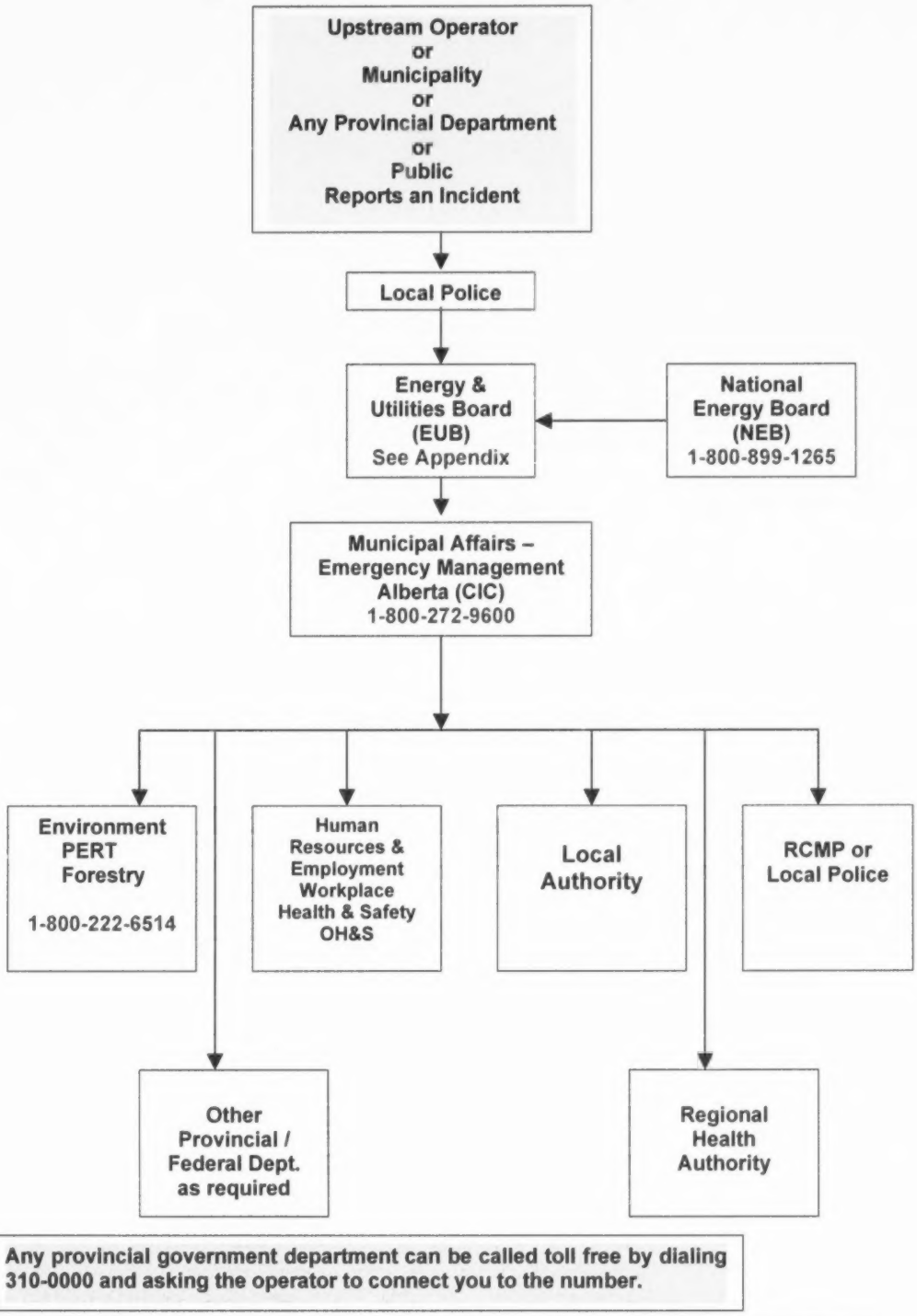
Tasks Matrix – Sustainable Resource Development – Forest Protection, Natural Resources Services, Fisheries and Wildlife Management

Before the Event		
✓	Task	Notes
	Prepared to assist the EUB with response to upstream petroleum industry incidents.	
	Reviews and recommends changes to this plan.	
	Participates in testing of this plan when it is exercised.	
	Trains personnel to carry out functions as assigned by their emergency plan or procedures.	
	Maintains the capability of sending an emergency planning officer (EPO) to the COMOC on a 7/24-hour basis.	
	Maintains 7/24-hour emergency contact numbers where resources can be accessed to carry out a response related to this plan.	

During the Event		
✓	Task	Notes
	If notified of an upstream emergency, informs the EUB and Alberta Municipal Affairs, Emergency Management Alberta of the notification.	
	Notifies Fisheries and Wildlife Management staff in the area about the event.	
	Fisheries and Wildlife Management Conservations Officers may be requested to assist the industrial operator and/or the local authority in establishing and maintaining roadblocks.	
	Forest Protection staff assists in notifying forestry personnel and Fish and Wildlife personnel of the hazard.	
	Assist in locating transients for evacuation.	
	Inform transients within the hazard area of the released contaminants and safety measure to take.	
	Provides advice to mitigate the release in the "green area".	
	Provides a representative to the OSCP and the off-site REOC, when requested.	
	Fight any fires started as the result of the product release within the "green area".	

After the Event		
✓	Task	Notes
	Compiles and maintains event records and log.	
	Conducts forest impact assessment.	
	Participates in event debriefings.	
	Completes reports concerning the incident.	

Government Notification and Call Down System
Upstream Petroleum Industry Incident



Emergency Telephone Numbers
24-hours unless noted

Alberta Energy & Utilities Board		
Location	**Telephone**	**Fax**
Bonnyville Field Centre	(780) 826-5352	(780) 826-2366
Drayton Valley Field Centre	(780) 542-5182	(780) 542-2540
Grande Prairie Field Centre	(780) 538-5138	(780) 538-5582
Medicine Hat Field Centre	(403) 527-3385	(403) 529-3103
Midnapore Field Centre	(403) 297-8303	(403) 297-5283
Red Deer Field Centre	(403) 340-5454	(403) 340-5136
St. Albert Field Centre	(780) 460-3800	(780) 460-3802
Wainwright Field Centre	(780) 842-7570	(780) 842-7536

Alberta Municipal Affairs, Emergency Management Alberta		
Location	**Telephone**	**Fax**
Province wide	1-(800) 272-9600	(780) 427-1044
Edmonton area	(780) 422-9600	
Normal Working Hours	(780) 422-9000	(780) 422-1549

Alberta Environment		
Location	**Telephone**	**Fax**
Province wide	1-(800) 222-6514	(780) 427-3178
Edmonton area	(780) 422-4505	(780) 427-3178

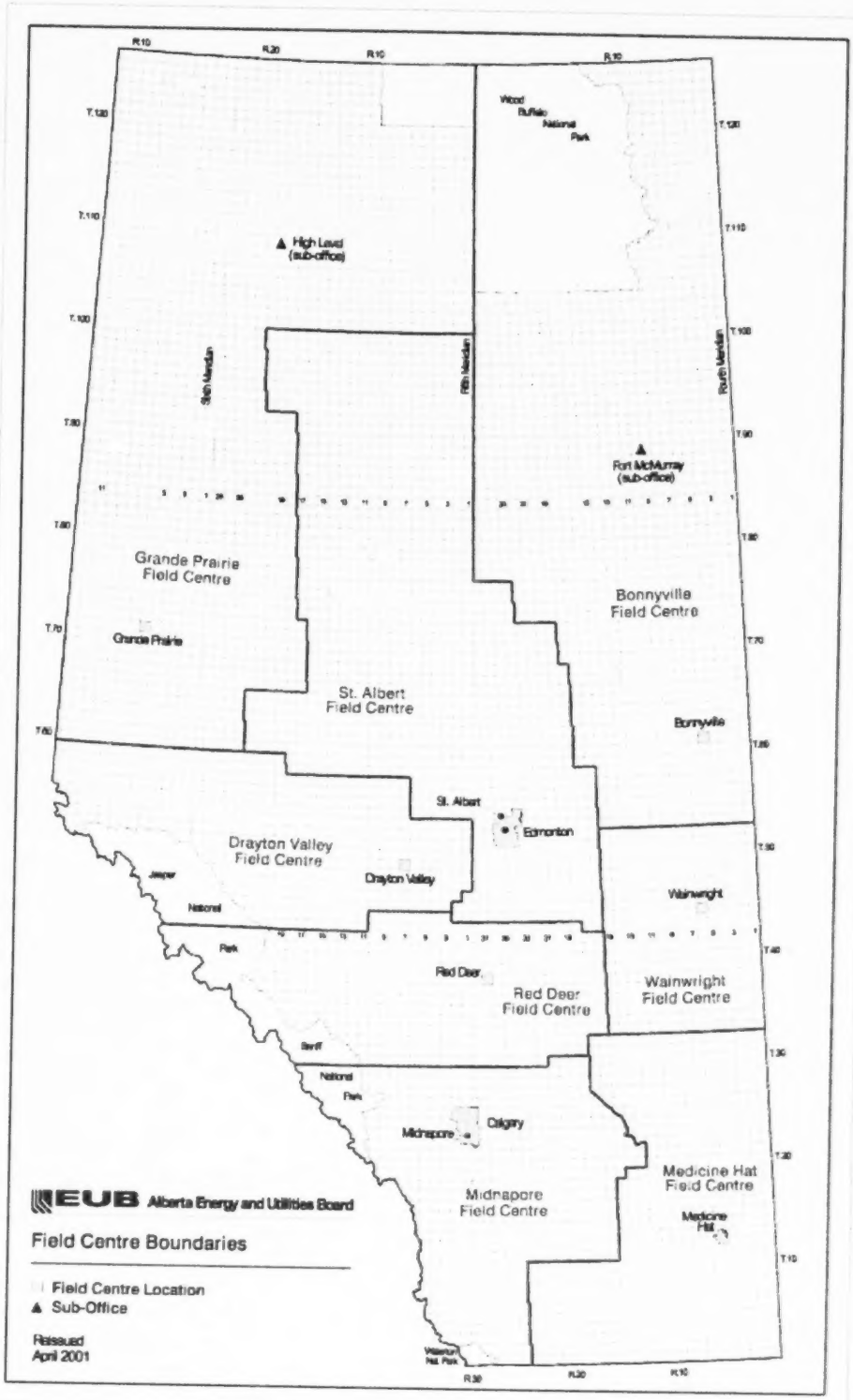
Alberta Human Resources and Employment – Workplace Health & Safety		
Location	**Telephone**	**Fax**
Province wide	1-(866) 415-8690	(780) 427-5698

Alberta Sustainable Resource Development – Fish and Wildlife Division		
Location	**Telephone**	**Fax**
Province wide	1 (800) 642-3800	(780) 427-0292
Edmonton area (normal working hours)	(780) 427-4943	(780) 422-9560

Alberta Sustainable Resource Development – Forest Protection Division		
Location	**Telephone**	**Fax**
Province wide	1-(800) 427-3473	(780) 427-0292
Edmonton area (normal working hours)	(780) 427-6807	(780) 422-0292

Telus – Provincial Network Operations Centre		
Location	**Telephone**	**Fax**
Calgary	(403) 530-5000	

Local Contacts (fill in the telephone numbers for your area)		
Location	**Telephone**	**Fax**
RCMP		
Local Authority		
Public Health Authority		


Wood Buffalo National Park
High Level (sub-office)
Fort McMurray (sub-office)
Grande Prairie Field Centre
Grande Prairie
St. Albert Field Centre
Bonnyville Field Centre
Bonnyville
St. Albert
Edmonton
Drayton Valley Field Centre
Drayton Valley
Jasper National Park
Red Deer
Red Deer Field Centre
Wainwright
Wainwright Field Centre
Banff National Park
Midnapore
Calgary
Midnapore Field Centre
Medicine Hat Field Centre
Medicine Hat
Waterton Lakes National Park
EUB Alberta Energy and Utilities Board
Field Centre Boundaries
Field Centre Location
Sub-Office
Released April 2001

Post Incident Report Form for Government Department/Agency Use

Department/Agency Information

Department/Agency:	
Representative:	
Position:	Telephone:

Event Specific Information

Incident Location: **DLS** _____ - _____ - _____ - _____ **W** _____ **M**	
Name of Upstream Operator:	
Type of Emergency:	
Duration of Response: _____ **days**	# Of Man-days s Devoted to Response: _____
Other Resources Used (may include monitoring units, aircraft, buses, etc.):	

Department/Agency role during the response?

Financial Information

Total estimated cost of response to department/agency:	**$** _____ . ___

What went well in the response?

Areas for improvement?

Miscellaneous Questions

	Yes	No
Was your department/agency able to respond effectively?		
Identify what additional training in emergency operations would be beneficial?		

Return this form to: **Executive Director**
Alberta Municipal Affairs, Emergency Management Alberta
14515 – 122 Avenue
Edmonton, Alberta T5L 2W4

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	**Criteria**	**Incident Examples**	**Possible Upstream Operator Actions**	**Possible Government Actions**
Level 1 – Low Impact	• No danger outside of operator's property. • Immediate control of hazard source. • No immediate danger to the public. • Minimal environmental impact. • Little or no media interest. • Situation handled entirely by operator's on-site personnel.	• A small release or potential for a small release of product with no potential for off-site impact. • Missing person on site. • Operator or contractor worker injury. • Serious property damage. • Receipt of complaint call. • Credible threat to an upstream facility or infrastructure. • Breach of site security or trespassers on site. • Small fire or explosion with no injuries, community impact or essential equipment damage.	• Operation response made. • Reported as required internally. • Complies with appropriate government reporting requirements. • Additional company personnel may be placed on stand-by status. • The upstream operator's initial response is undertaken in accordance with the operator's emergency response plan (either the site specific or corporate plan).	• No response action required. • Situation monitored. • The regulatory authorities may investigate event.

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	Criteria	Incident Examples	Possible Upstream Operator Actions	Possible Government Actions
Level 1 – Low Impact	• No danger outside of operator's property. • Immediate control of hazard source. • No immediate danger to the public. • Minimal environmental impact. • Little or no media interest. • Situation handled entirely by operator's on-site personnel.	• A small release or potential for a small release of product with no potential for off-site impact. • Missing person on site. • Operator or contractor worker injury. • Serious property damage. • Receipt of complaint call. • Credible threat to an upstream facility or infrastructure. • Breach of site security or trespassers on site. • Small fire or explosion with no injuries, community impact or essential equipment damage.	• Operation response made. • Reported as required internally. • Complies with appropriate government reporting requirements. • Additional company personnel may be placed on stand-by status. • The upstream operator's initial response is undertaken in accordance with the operator's emergency response plan (either the site specific or corporate plan).	• No response action required. • Situation monitored. • The regulatory authorities may investigate event.

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	**Criteria**	**Incident Examples**	**Possible Upstream Operator Actions**	**Possible Government Actions**
Level 2 – Moderate Impact **(Notification mandatory)**	• No immediate danger outside operator property, potential exists for off-site impact. • Appropriate municipal and provincial organizations must be notified of the Level 2 incident. • Imminent control of the hazard is probable. • Moderate threat to the public. • Moderate environmental impact. • Local or regional media interest. • There is great concern and anxiety on behalf of the public.	• Confirmed release with imminent control of the hazard possible. • Injuries or accidents involving the public. • Closure of a primary or secondary highway. • Issue of NOTAMS. • Closure of rail line. • Mischievous acts by trespassers that could threaten public safety. • Fire or explosion that has direct impact to public safety. • Major spill with widespread environmental impact.	• The operator fully activates their emergency plan. • Internal and external response resources are mobilized. • The upstream operator establishes an OSCP. • The local authority is notified and may partially activate the MEOC. • The EUB must be immediately notified. • Public safety actions are implemented (e.g., evacuation, sheltering or planned ignition). • SitReps are provided to the EUB and or other partners). • News media communications are prepared and released.	• The upstream operator has the capability to manage and control the incident using company resources and expertise with some assistance from the local authority and government agencies. • A government department receiving a level 2 notification will immediately notify the EUB who will activate the call-down and notification system. • The EUB activates this plan. • EUB may request that the COMOC be placed on stand-by or activated. • The EUB may request that appropriate government department personnel be mobilized for supporting the response.

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	**Criteria**	**Incident Examples**	**Possible Upstream Operator Actions**	**Possible Government Actions**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	Criteria	Incident Examples	Possible Upstream Operator Actions	Possible Government Actions
Level 2 – Moderate Impact (Notification mandatory)	• No immediate danger outside operator property, potential exists for off-site impact. • Appropriate municipal and provincial organizations must be notified of the Level 2 incident. • Imminent control of the hazard is probable. • Moderate threat to the public. • Moderate environmental impact. • Local or regional media interest. • There is great concern and anxiety on behalf of the public.	• Confirmed release with imminent control of the hazard possible. • Injuries or accidents involving the public. • Closure of a primary or secondary highway. • Issue of NOTAMS. • Closure of rail line. • Mischievous acts by trespassers that could threaten public safety. • Fire or explosion that has direct impact to public safety. • Major spill with widespread environmental impact.	• The operator fully activates their emergency plan. • Internal and external response resources are mobilized. • The upstream operator establishes an OSCP. • The local authority is notified and may partially activate the MEOC. • The EUB must be immediately notified. • Public safety actions are implemented (e.g., evacuation, sheltering or planned ignition). • SitReps are provided to the EUB and or other partners). • News media communications are prepared and released.	• The upstream operator has the capability to manage and control the incident using company resources and expertise with some assistance from the local authority and government agencies. • A government department receiving a level 2 notification will immediately notify the EUB who will activate the call-down and notification system. • The EUB activates this plan. • EUB may request that the COMOC be placed on stand-by or activated. • The EUB may request that appropriate government department personnel be mobilized for supporting the response.

Guide for Determining Impact Level and Possible Actions				
Community Impact Level	Criteria	Incident Examples	Possible Upstream Operator Actions	Possible Government Actions
Level 3 – High Impact	• The safety of the public is jeopardized. • The hazard source is not controlled. • Significant or on-going environmental impacts. • Immediate multi-agency (operator, municipal, provincial or federal) response. • Assistance from outside specialists is required.	• Monitored H_2S levels reach ignition criteria. • Major incident with impact on the public. • Explosion with extensive damage to public facilities. • Mischievous acts which result in major public impact. • Major fire in a populated area. • Major forest fire resulting from an upstream petroleum incident.	• Upstream operator's response is at maximum. • Upstream operator notifies the EUB and the local authority. • Upstream operator establishes and operates OSCP and CREOC. • Upstream operator dispatches liaison staff to MEOC and COMOC. • Upstream operator mobilizes corporate emergency response resources (e.g., public affair, legal, executive, etc.).	• A government department receiving a level 3 notification will immediately notify the EUB who will activate the call-down and notification system. • EUB activates this plan. • EUB requests that the COMOC be activated. • EUB requests that government department response personnel be dispatched to the OSCP and REOC. • Liaison personnel dispatched to REOC, MEOC and COMOC as required. • PMIR mobilized. • COMOC partially or fully activated to support the upstream operator and the municipal response.

Agreements, Memorandums of Understanding and Information

The following is a listing of some of the agreements and memorandums of understanding that contribute to the partnership approach to facilitate public safety in the upstream sector of the petroleum industry.

Reference	Description	Date of Issue
EUB IL 98-1	MOU between Alberta Environmental Protection[1] and the EUB regarding co-ordination of release notification requirements and subsequent regulatory response.	6 February 1998
EUB IL 98-2	MOU between Alberta Environmental Protection and the EUB on suspension, abandonment, decontamination and surface land reclamation of upstream oil and gas facilities.	26 March 1998
EUB-NEB	MOU between the EUB and the National Energy Board concerning mutual aid in respect of pipeline incident investigation and emergency response.	15 April 1995
ERCB IL 95-05	MOU between Alberta Environment and the EUB on administrative procedures for publication of notice of application.	1995
EUB GB 95-10	Description of agency roles and responsibilities for addressing public complaints involving animal health issues alleged to be caused by the operation of energy facilities.	
EUB IL 96-11	Emergency Response Support Plan for the Upstream Petroleum Industry between the EUB and Alberta Transportation and Utilities[2].	8 August 1996
ERCB-IOGC	Interface agreement between ERCB Field Operations Department and Indian Oil and Gas Canada.	29 November 1995
ERCB-LCRC	Agreement of understanding between ERCB and the Land Conservation and Reclamation Council Division of Alberta Environment concerning joint inspections.	7 January 1991
ERCB-AL	Working agreement between EUB Field Operations and Alberta Labour's Occupational Health and Safety[3] field staff that ensures effective response to emergencies.	21 March 1995
EUB-NEB	Canada/Alberta action to reduce overlap and duplication and foster cooperation.	June 1993 and July 1995
GOA	Government of Alberta protocol for the co-ordination of multi-departmental joint investigations on issues of public safety.	14 November 1994

[1] Now Alberta Environment
[2] Now Alberta Municipal Affairs, Emergency Management Alberta
[3] Now Human Resources and Employment

Emergency Preparedness in Alberta

The following tables provide a reference of various documents that make up part of the emergency preparedness activities within the province.

For information about the following emergency plans or emergency planning models, contact:

Emergency Management Alberta
Alberta Municipal Affairs
16th floor; Commerce Place
10155 - 102 Street
Edmonton, AB T5J 4L4

Tel: (780) 422-9000 (In Alberta call toll free: 310-0000)
Fax: (780) 422-1549

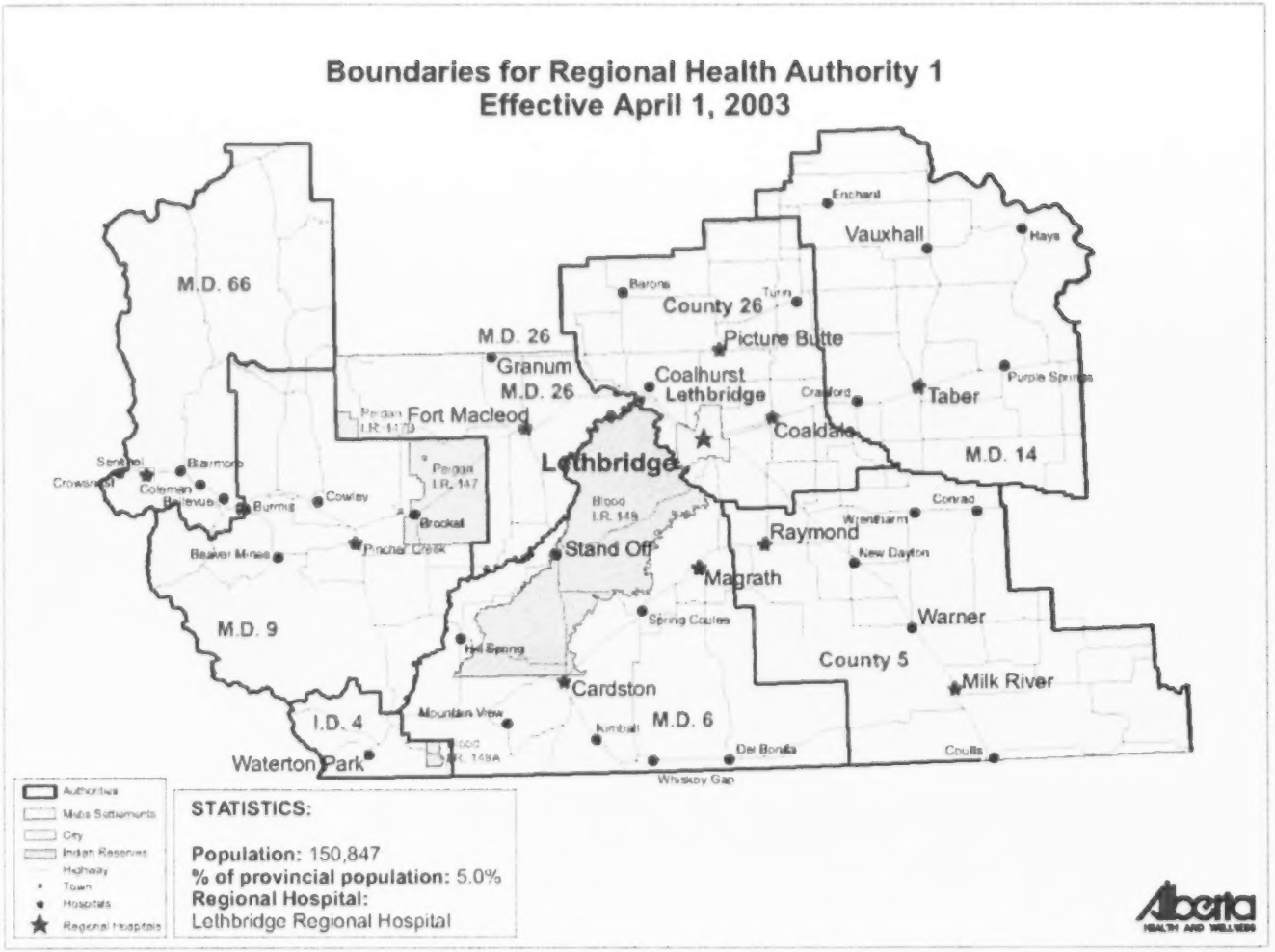
Legislation		
Name	Reference	Comments
Disaster Services Act	Chapter D-13 RSA	- Crown bound - Administration - State of emergency
Government Emergency Planning Regulation	Alberta Regulation 62/2000	- Responsibilities of Emergency Management Alberta - Responsibilities of departments - Emergency plans of departments - Emergency planning officers
Disaster Recovery Regulation	Alberta Regulation 51/94	- Guidelines - Limits on compensation - Widespread disasters - Localized disasters - Emergency operations compensation

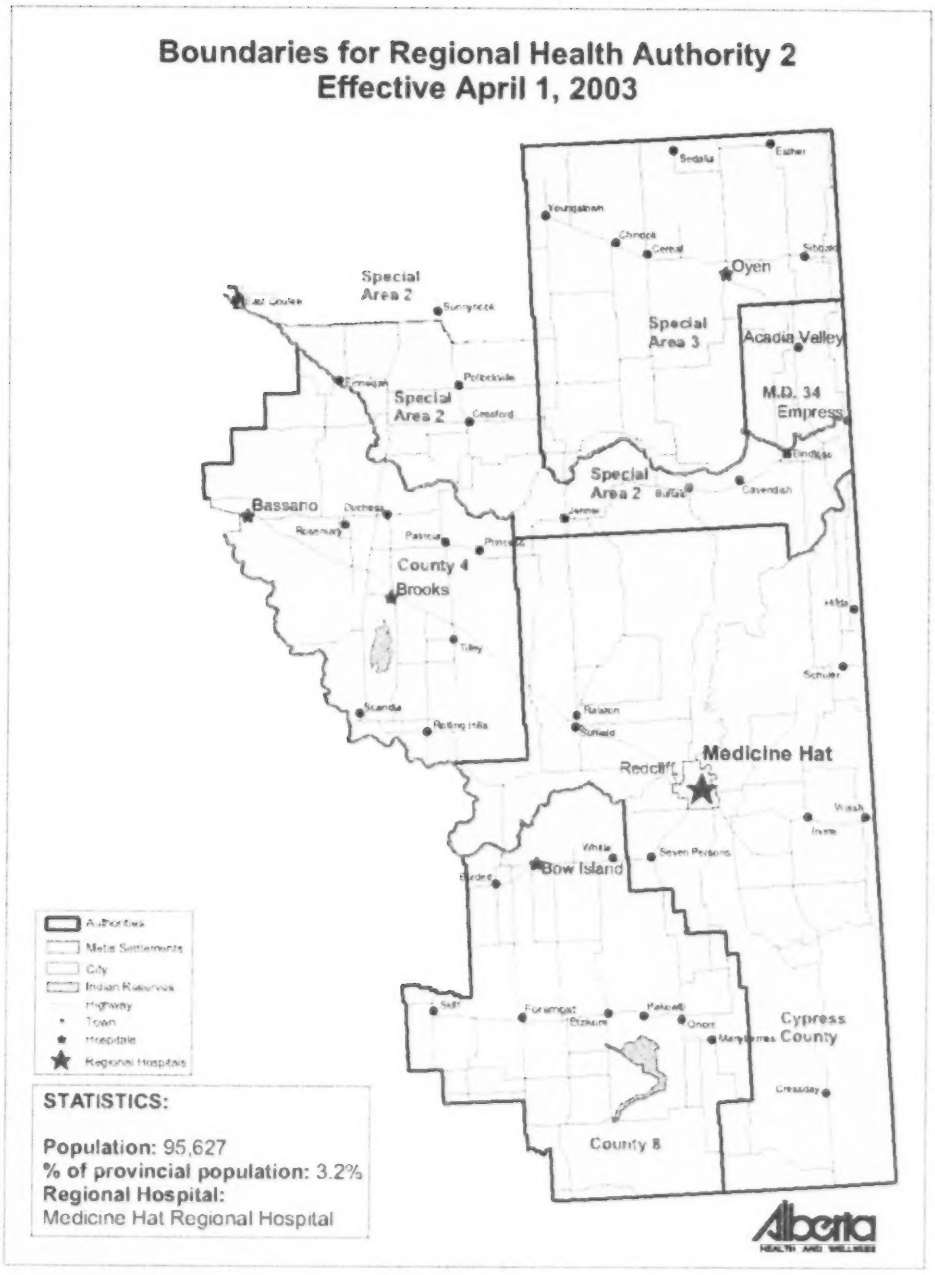
Provincial Plans	
Name	Comments
Alberta Emergency Plan	- Contains the provincial framework for planning and coordinating assistance, providing guideline for government departments and agencies when a response requires provincial resources. - Describes national emergency arrangements. - Describes government departments and agency responsibilities.
Alberta Emergency Public Warning System (EPWS) – Operational Plan	- EPWS is designed to give local government officials the ability to broadcast an emergency warning quickly and directly to radio, cable and television stations.
Critical Pest Infestation Response Plan	- Outlines how all levels of government will respond to a critical pest infestation posing a serious threat to agricultural or forest resources in Alberta.

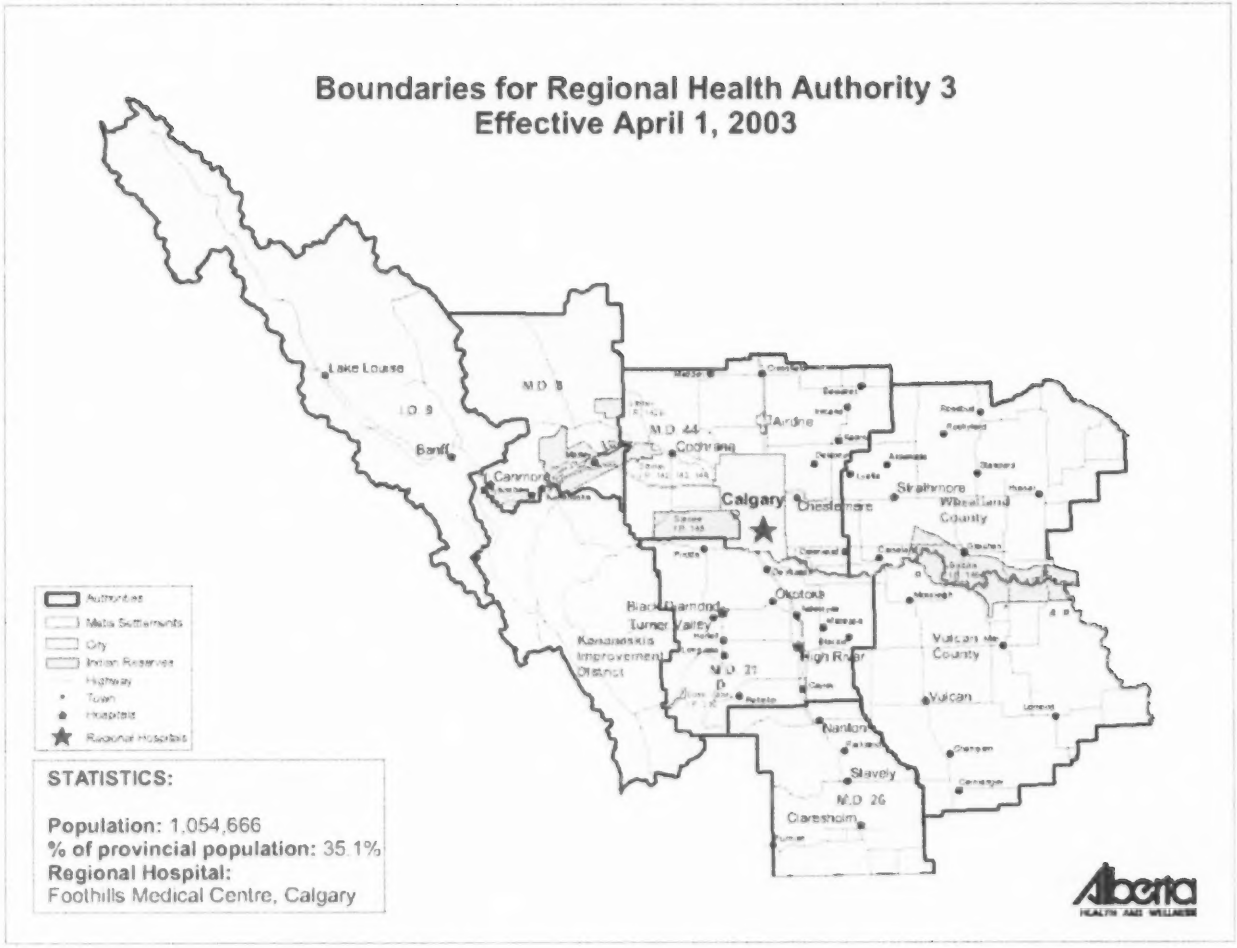
Provincial Plans	
Name	Comments
Dangerous Goods Incident Support Plan	- Outlines how the government and private sector will assist the industrial operator and local authorities to respond to a dangerous goods incident.
Foreign Animal Disease Eradication Support Plan	- Outlines how the three levels of government will assist Agriculture and Agri-Food Canada to eradicate a foreign animal disease outbreak in Alberta.
Support Plan for Catastrophic Earthquake in British Columbia	- The purpose of this plan is to co-ordinate public and private sector support to assist British Columbia to respond to and recover from a catastrophic earthquake. - Outlines how the governments of Alberta and Canada and local authorities in Alberta will support provincial and federal authorities in British Columbia with public and private sector resources.
Support Plan for Search and Rescue Operations	- Outlines how provincial departments, the Department of National Defence, the Canadian Parks Service, police services, and non-governmental organizations will coordinate search and rescue operations.

Planning Models	
Name	Comments
Campus Disaster Planning Model	- Assists secondary training institution disaster planners in the development, implementation, assessment and revision of their campus disaster plans.
Dam Breach Emergency Response Plan	- Developed by Emergency Management Alberta and the Dam Safety and Water Projects Branch of Alberta Environment. - Intended to assist dam owners in the development and implementation of their Dam Breach Emergency Response Plan.
Disaster Social Services – Planning Model	- Assist large and small communities in developing and activating their Disaster Social Services Response Plan, which is a specialized component of the Municipal Emergency Plan.
Disaster Social Services – Planned Emergency Response	- Assists local authorities in the development of a Disaster Social Services structure and to develop plans for serving the needs of evacuees.
First Nations School Disaster Plan	- A guideline to help emergency planners in the development, implementation, assessment and revision of school disaster plans.

Planning Models	
Name	Comments
Government Department Business Resumption Guide	- Assists departments affected by an emergency or disaster to restore essential services as quickly as possible so that service to the public or other clients can be continued.
Healthcare Facility – Mass Casualty Response Planning Model	- Assists local health authorities to develop, implement, assess, and revise mass casualty response plans for active treatment hospitals.
Healthcare Facility – External Evacuation Planning Model	- Assists local health authorities to develop, implement, assess, and revise evacuation plans for healthcare facilities.
Model Plan for First Nation Communities	- Assists first nation communities in developing, implementing or revising their emergency plan.
Model Plan for Municipalities	- Assists municipalities in developing, implementing or revising their emergency plan and uses a standardized format that facilitates an effective co-ordination of resources when mutual aid assistance is required.
Occupational Health Facility – Mass Casualty Response Planning Model	- Assists occupational health personnel to develop, implement, assess, and revise their mass casualty response plan. - Assists staff to address all aspects of planning, staff responsibilities, activation of the plan, and include functional area check lists.
Public Health Emergency Planning Guide	- Assists the public health services within a Regional Health Authority to develop and implement the components of a disaster response plan.
Regional Health Authority Emergency Planning Guide	- Assists Regional Health Authorities (RHAs) to develop a coordinated emergency plan.
School Board Disaster Planning Model	- Assists school board emergency planners in the development, implementation, assessment and revision of their school board disaster plan.
School Disaster Planning Model	- Assists school disaster planners in the development, implementation, assessment and revision of their school disaster plans.


Boundaries for Regional Health Authority 1
Effective April 1, 2003
M.D. 66
M.D. 26
Granum
M.D. 26
Fort Macleod
Lethbridge
Coalhurst
Lethbridge
County 26
Picture Butte
Vauxhall
Enchant
Hays
Taber
Coaldale
M.D. 14
Purple Springs
Crawford
Barons
Turin
Conrad
Wrentham
Raymond
New Dayton
Warner
County 5
Milk River
Coutts
Magrath
Stand Off
Spring Coulee
Cardston
Mountain View
Hillspring
M.D. 6
Kimball
Del Bonita
Whiskey Gap
Waterton Park
I.D. 4
M.D. 9
Beaver Mines
Pincher Creek
Brocket
Cowley
Burmis
Bellevue
Coleman
Blairmore
Sentinel
Crowsnest
Peigan I.R. 147
Blood I.R. 148
Authorities
Métis Settlements
City
Indian Reserves
Highway
Town
Hospitals
Regional Hospitals
STATISTICS:
Population: 150,847
% of provincial population: 5.0%
Regional Hospital:
Lethbridge Regional Hospital
Alberta
HEALTH AND WELLNESS


Boundaries for Regional Health Authority 2
Effective April 1, 2003
Special Area 2
Special Area 3
Special Area 2
Special Area 2
Oyen
Acadia Valley
M.D. 34 Empress
Bassano
County 4
Brooks
Medicine Hat
Redcliff
Bow Island
Cypress County
County 8
Authorities
Metis Settlements
City
Indian Reserves
Highway
Town
Hospitals
Regional Hospitals
STATISTICS:
Population: 95,627
% of provincial population: 3.2%
Regional Hospital:
Medicine Hat Regional Hospital
Alberta
HEALTH AND WELLNESS


Boundaries for Regional Health Authority 3
Effective April 1, 2003
Lake Louise
M.D. 9
Banff
M.D. 8
M.D. 44
Cochrane
Airdrie
Canmore
Calgary
Chestermere
Strathmore
Wheatland County
Okotoks
Black Diamond
Turner Valley
Kananaskis Improvement District
M.D. 21
High River
Vulcan County
Vulcan
Nanton
Stavely
M.D. 26
Claresholm
Authorities
Metis Settlements
City
Indian Reserves
Highway
Town
Hospitals
Regional Hospitals
STATISTICS:
Population: 1,054,666
% of provincial population: 35.1%
Regional Hospital:
Foothills Medical Centre, Calgary
Alberta
HEALTH AND WELLNESS

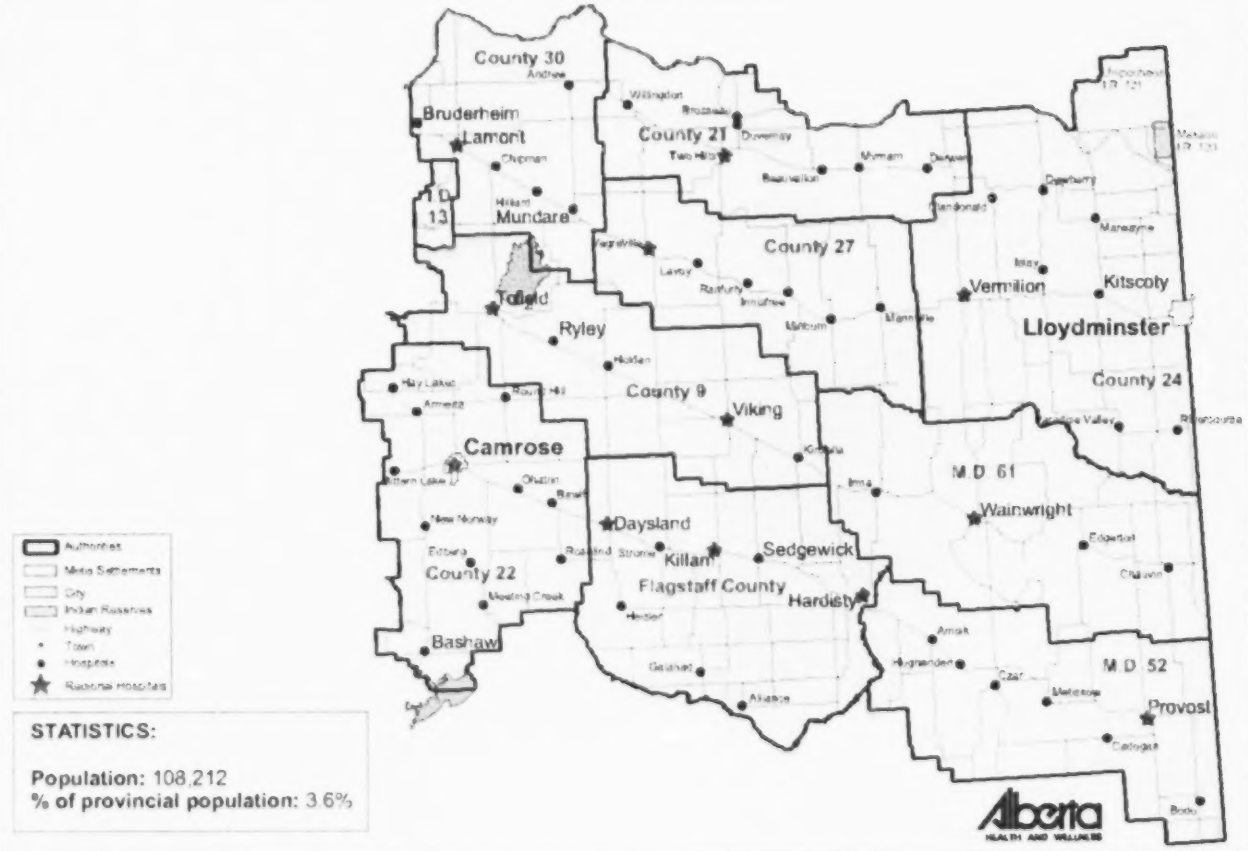
Boundaries for Regional Health Authority 4
Effective April 1, 2003

STATISTICS:

Population: 289,651
% of provincial population: 9.6%
Regional Hospital:
Red Deer Regional Hospital

Alberta
HEALTH AND WELLNESS

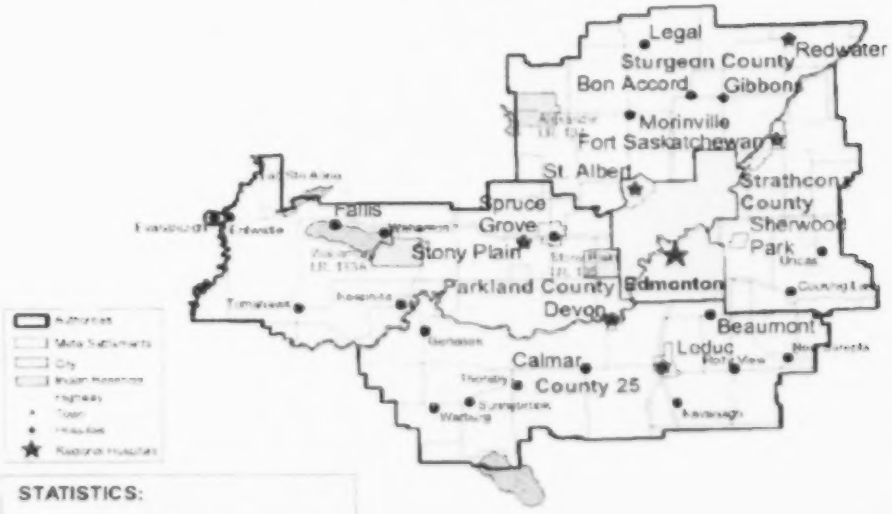
Boundaries for Regional Health Authority 5
Effective April 1, 2003



STATISTICS:

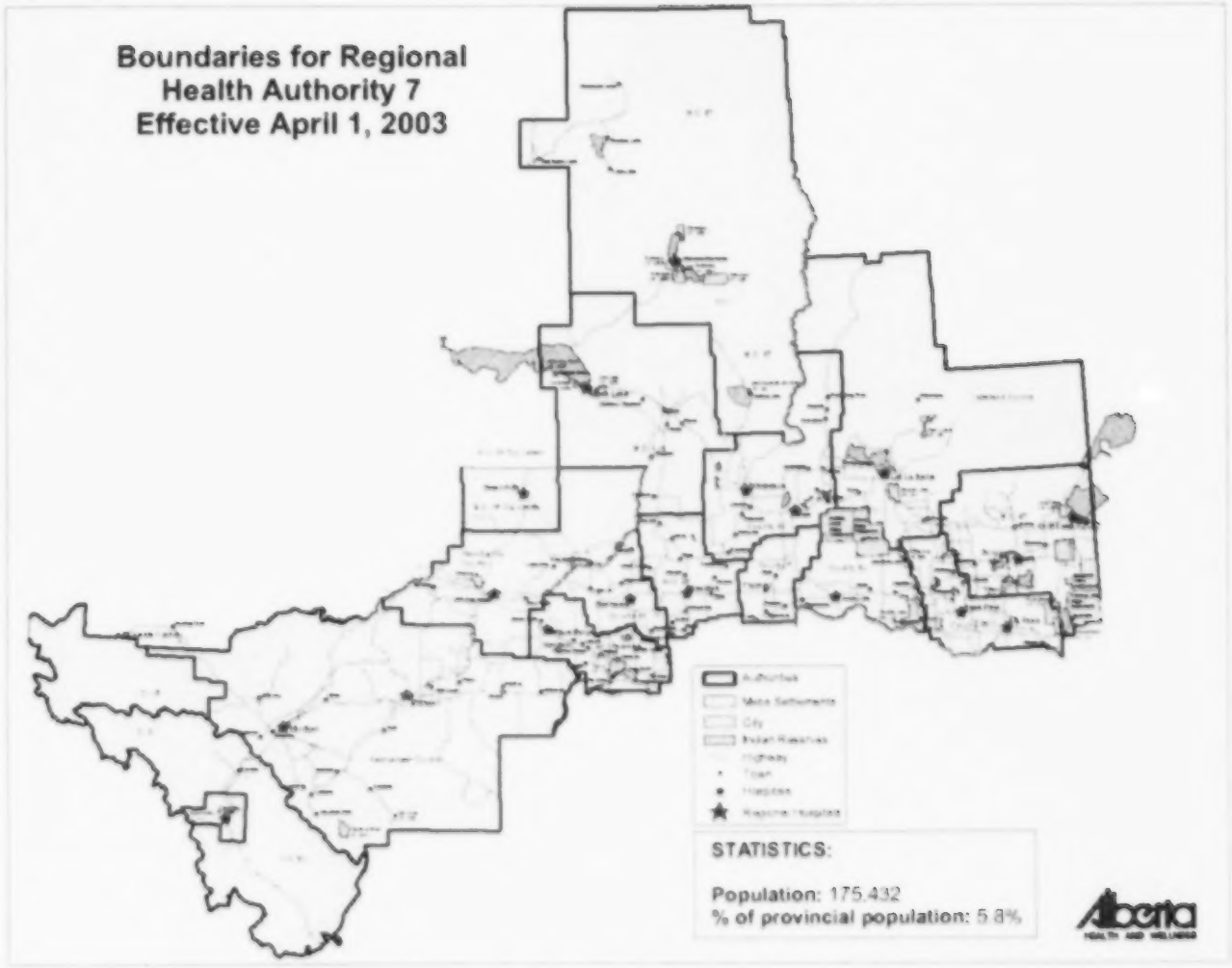
Population: 108,212
% of provincial population: 3.6%

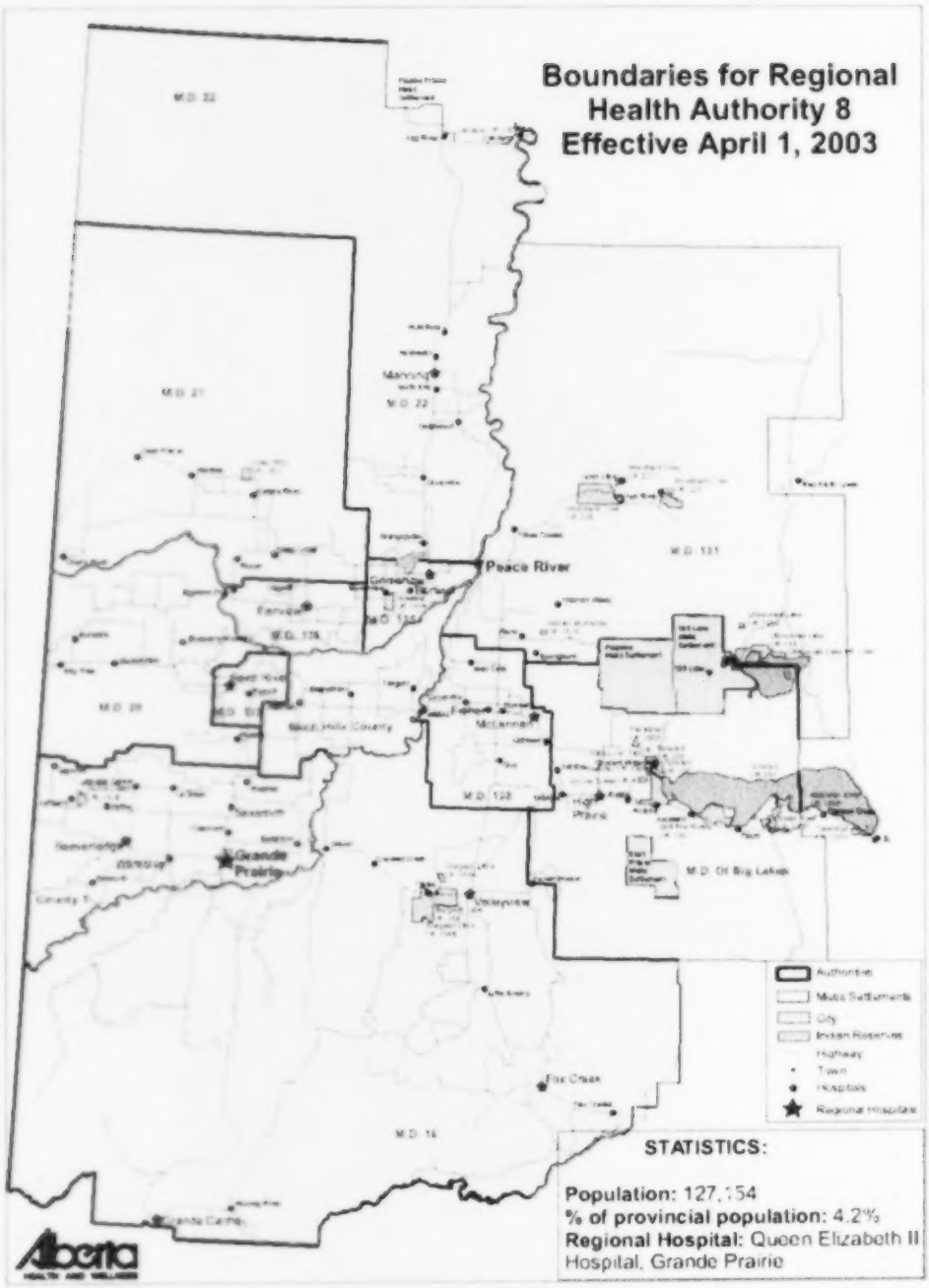
Boundaries for Regional Health Authority 6
Effective April 1, 2003

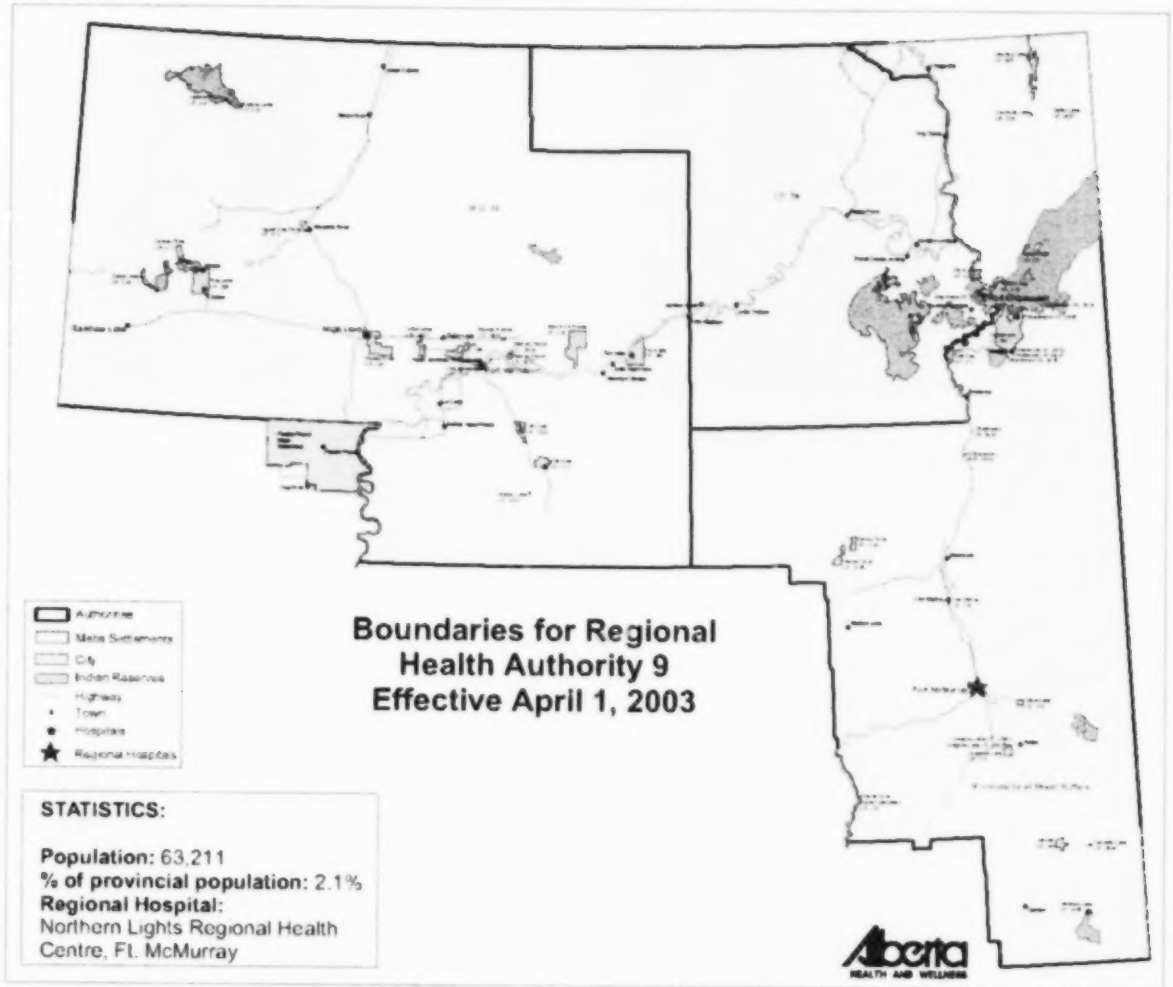


STATISTICS:

Population: 941,838
% of provincial population: 31.3%
Regional Hospital:
University of Alberta Hospital,
Edmonton


Boundaries for Regional
Health Authority 7
Effective April 1, 2003
STATISTICS:
Population: 175,432
% of provincial population: 5.8%
Alberta


Boundaries for Regional Health Authority 8 Effective April 1, 2003
Peace River
Grande Prairie
Fox Creek
STATISTICS:
Population: 127,154
% of provincial population: 4.2%
Regional Hospital: Queen Elizabeth II Hospital, Grande Prairie
Alberta


Boundaries for Regional
Health Authority 9
Effective April 1, 2003
Hospitals
Regional Hospitals
STATISTICS:
Population: 63,211
% of provincial population: 2.1%
Regional Hospital:
Northern Lights Regional Health
Centre, Ft. McMurray
Alberta

Regional Health Authorities

Health Region 1 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-Hour Telephone**
Lethbridge Regional Hospital	(403) 388-6009 1-800-595-2742	(403) 388-6011	(403) 381-4636
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. David Swann	960 - 19 St. Lethbridge T1J 1W5	dswann@mail.chr.ab.ca	(403) 388-6014 (403) 388-6665
Aetna	Barnwell	Barons	Bellevue
Blairmore	Brocket	Cardston	Coaldale
Coalhurst	Coleman	Coutts	Cowley
Cranford	Del Bonita	Diamond City	Enchant
Fort Macleod	Glenwood	Granum	Grassy Lake
Hays	Hill spring	Hillcrest Mines	Iron Springs
Lethbridge	Lundbreck	McGrath	Milk River
Monarch	Mountain View	New Dayton	Nobleford
Picture Butte	Pincher Creek	Purple Springs	Raymond
Shaughnessy	Spring Coulee	Stand Off	Stirling
Taber	Turin	Twin Butte	Vauxhall
Warner	Waterton Park	Welling	Wrentham

Health Region 2 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
Medicine Hat Regional Hospital	(403) 528-5633	(403) 529-8998	(403) 529-8000 Emerg (403) 529 - 8978
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Vince DiNinno	666 – 5th St SW Medicine Hat T1A 4H6	vdininno@ palliserhealth.ca	(403) 529-8024
Acadia Valley	Aden	Bassano	Big Stone
Bindloss	Bow Island	Brooks	Buffalo
Burdett	Cereal	Cessford	Chinook
Dorothy	Duchess	Dunmore	Elkwater
Empress	Esther	Etzikom	Finnegan
Foremost	Gem	Hilda	Iddesleigh
Irvine	Jenner	Maleb	Manyberries
Medicine Hat	Millicent	New Bridgen	Onefour
Orion	Oyen	Patricia	Pollockville
Rainier	Ralston	Redcliff	Rolling Hills
Rosemary	Scandia	Schuler	Sedalia
Seven persons	Sibbald	Skiff	Sunnynook
Tilley	Walsh	Wardlow	Youngstown

Health Region 3 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
Foothills Medical Centre Calgary	(403) 943 - 1111	(403) 943 - 1108	(403) 943 -5465
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Brent Friesen	10101 Southport Rd. SW Calgary T2W 3N2	brent.friesen@calgaryhealthregion.ca	(403) 943-1279 (403) 943-1280
Airdrie	Aldersyde	Arrowwood	Balzac
Banff	Beiseker	Black Diamond	Blackie
Bragg Creek	Brant	Calgary	Canmore
Carmangay	Carseland	Cayley	Champion
Chestermere	Chestermere Lake	Claresholm	Cluny
Cochrane	Crossfield	Dalemead	De Winton
Dead Man's Flats	Delacour	Ensign	Exshaw
Gleichen	Harvie Heights	High River	Hussar
Irricana	Kananaskis	Kathryn	Keoma
Lac Des Arcs	Lake Louise	Langdon	Lomond
Longview	Lyalta	Madden	Millarville
Milo	Morley	Mossleigh	Nanton
Okotoks	Parkland	Priddis	Redwood Meadows
Rockyford	Rosebud	Seebe	Siksika
Standard	Stavely	Strathmore	Tsuu T'ina
Turner Valley	Vulcan		

Health Region 4 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
Red Deer Regional Hospital	(403) 341-8622	(403) 341-8632	(403) 343-4422 1-800-752-8957
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Martin Lavoie	2845 Bremner Ave. Red Deer T4R 1S2	mlavoie@dthr.ab.ca	(403) 341-2482
Acme	Alder Flats	Alhambra	Alix
Alsike	Altario	Benalto	Bentley
Big Valley	Birchcliff	Blackfalds	Bluffton
Botha	Bowden	Brenton	Brownfield
Buck Creek	Buck Lake	Byemoor	Carbon
Carnwood	Caroline	Carstairs	Castor
Clive	College Heights	Compeer	Condor
Consort	Coronation	Craigmyle	Cremona
Cynthia	Delburne	Delia	Didsbury
Donalda	Drayton Valley	Drumheller	East Coulee
Eckville	Elnora	Endiang	Erskine
Falun	Fenn	Gadsby	Gwynne
Halfmoon Bay	Halkirk	Hanna	Hobbema
Huxley	Innisfail	James River Bridge	Jarvis Bay
Kirriemuir	Lacombe	Lacombe County	Leslieville
Lindale	Linden	Lodgepole	Lousana
Ma-Me-O Beach	Marketville	Millet	Mirror
Monitor	Morrin	Mulhurst Bay	Munson
Mynarski Park	Nacmine	Nevis	Nordegg
Norglenwold	Olds	Penhold	Pine Lake
Ponoka	Red Deer	Red Willow	Rimbey
Rocky Mt. House	Rocky Rapids	Rosedale Station	Rosedale Valley
Rowley	Rumsey	Springbrook	Spruce View
Stauffer	Stettler	Sundre	Swalwell
Sylvan lake	Tees	Three hills	Throne
Torrington	Trochu	Veteran	Water Valley
Westerose	Wetaskiwin	Wimborne	Winfield

Health Region 5 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
St Mary's Hospital Camrose	(780) 608-8800	(780) 672 -5023	1-800-608-1516

Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Gerhard Benade	4615 – 56 St. Camrose T4V 4M5	gerhard.benade@eastcentralhealth.com	(780) 679-2975

Alliance	Amisk	Andrew	Armena
Bashaw	Bawlf	Beauvallon	Bittern Lake
Blackfoot	Bodo	Brosseau	Bruce
Bruderheim	Cadogan	Camrose	Chauvin
Chipman	Clandonald	Czar	Daysland
Denwood	Derwent	Dewberry	Edberg
Edgerton	Ferintosh	Forestburg	Galahad
Hairy Hill	Hardisty	Hay Lakes	Hayter
Heath	Heisler	Hilliard	Holden
Hughenden	Innisfree	Irma	Islay
Kelsey	Killam	Kingman	Kinsella
Kitscoty	Lamont	Lavoy	Lloydminister
Lougheed	Mannville	Marwayne	McLaughlin
Meeting Creek	Metiskow	Minburn	Mundare
Musidora	Myrnam	New Norway	Ohaton
Paradise Valley	Provost	Ranfurly	Rivercourse
Rosalind	Round Hill	Ryley	Sedgewick
St Michael	Star	Streamstown	Strome
Tofield	Tulliby Lake	Two Hills	Vegreville
Vermilion	Viking	Wainwright	Willington
Wostok			

Health Region 6 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
University of Alberta Edmonton	(780) 407-1000	(780) 407-7481	(780) 433-1441 1-866-408-5465
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Gerry Predy	Suite 300 10216 – 124 St. NW Edmonton T5N 4A3	gpredy@cha.ab.ca	(780) 413-7900
Alcomdale	Ardrossan	Beaumont	Bon Accord
Calahoo	Calmar	Carvel	Cooking Lake
Devon	Duffield	Edmonton	Enoch
Entwhistle	Evansburg	Fallis	Fort Saskatchewan
Gainford	Gibbons	Kapasiwin	Lancaster Park
Leduc	Legal	Morinville	Namao
New Sarepta	Nisku	North Cooking Lake	Redwater
Riviere Qui Barre	Rolly View	Seba Beach	Sherwood Park
Spruce Grove	Spruce Grove/ Aspen	St Albert	Stony Plain
Sunnybrook	Thorsby	Tomahawk	Wabamun
Warburg	Winterburn		

Health Region 7 Communities			
Contact	**RHA Office Telephone**	**Fax**	**24-hour Telephone**
Aspen Regional Health Authority	(780) 349-8705	(780) 349-4879	(780) 865-3333
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. David Johnson	10003 – 100 St Westlock T7P 2E8		(780) 967-6844 ext 264 (780) 905-4747
Abee	Alberta Beach	Ardmore	Ashmont
Athabasca	Atmore	Barrhead	Bellis
Bloomsbury	Blue Ridge	Bonnyville	Boyle
Boyne Lake	Breynat	Brule	Busby
Cadomin	Calling Lake	Camp Creek	Canyon Creek
Carrot Creek	Caslan	Cherhill	Cherry Grove
Chisholm Mills	Clyde	Cold Lake	Colinton
Dapp	Darwell	Desmarais	Edson
Egremont	Elk Point	Ellscott	Fawcett
Flatbush	Foisy	Fort Assiniboine	Fort Kent
Frog Lake	Glendon	Glenevis	Goodfish Lake
Goodridge	Grand Centre	Grasslands	Gunn
Gurneyville	Heinsburg	Hinton	Hondo
Hoselaw	Hylo	Iron River	Island Lake
Island South Lake	Jarvie	Jasper	Kehewin
Kiniko	La Corey	Lac La Biche	Lac Ste. Anne County
Lafond	Lake Isle	Lindbergh	Lone Pine
Mallaig	Mayerthorpe	Mcrae	Medley
Neerlandia	Nestow	Newbrook	Niton Junction
Onoway	Opal	Peerless Lake	Peers
Perryvale	Pickardville	Plamondon	Radway
Red Earth Creek	Robb	Rochester	Rochfort Bridge
Saddle Lake	Sangudo	Slave Lake	Smith
Smoky Lake	South Baptiste	Spedden	Sputinow
St Brides	St Lina	St Paul	St Vincent
Swan Hills	Tawatinaw	Thorhild	Tiger Lily
Trout Lake	Vega	Vilna	Vimy
Wabasca	Wandering River	Warspite	Waskatenau

Health Region 8 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
Peace Country Health Region	(780) 538-5387	(780) 538-5455	(780) 538-5387
Medical Officer/Health	**Address**	**Email**	
Dr. Piepgrass	Main Floor, Provincial Building 10320 – 99 Street Grande Prairie, AB T8V 6J4	moh@pchr.ca	(780) 538 -7279
Atikameg	Bay Tree	Bear Canyon	Beaverlodge
Berwyn	Bezanson	Blueberry Mountain	Bluesky
Bonanza	Brownvale	Cadotte Lake	Calais
Carcajou	Cherry Point	Clairmont	Cleardale
Crooked Creek	Deadwood	Debolt	Demmitt
Dixonville	Donnelly	Driftpile	Eaglesham
Elmworth	Enilda	Eureka River	Fairview
Falher	Faust	Fox Creek	Gift Lake
Girouxville	Goodfare	Gordondale	Grande Cache
Grande Prairie	Grimshaw	Grouard	Grovedale
Gundy	Guy	High Prairie	Hines Creek
Hotchkiss	Hythe	Jean Cote	Joussard
Keg River	Kinuso	La Glace	Little Smoky
Manning	Marie Reine	McLennan	Nampa
North Star	Notikewin	Peace River	Rycroft
Sexsmith	Silver Valley	Spirit River	St Isidore
Sunset House	Tangent	Valhalla Centre	Valleyview
Wanham	Watino	Wembley	Whitelaw
Woking	Worsley		

Health Region 9 Communities			
Contact	**RHA Office Telephone**	**Fax Number**	**24-hour Telephone**
Northern Lights Regional Health Centre Fort McMurray	(780) 791-6024	(780) 791-6029	(780) 791-6161
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. A.J. Nicholson	7 Hospital St. Fort McMurray T9H 1P2	anicholson@nlrha.ab.ca	(780) 791-6137
Anzak	Buffalo Head Prairie	Chard	Chateh
Conklin	Fort Chipewyan	Fort McKay	Fort McMurray
Fort Vermilion	Fox Lake	Garden River	High Level
John D'Or Prairie	La Crete	Meander River	Paddle Prairie
Rainbow Lake	Zama City		

Provincial Health Office Alberta Health & Wellness			
	Address	**Email**	**Telephone**
	24th Floor 10025 Jasper Ave. Telus Plaza North Tower Edmonton, AB T5J 2N3		(780) 310-0000 (780) 427 – 7164

First Nations Health - Tsuu T'ina			
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. David Strong	Suite 310 9911 Chula Blvd. Sarcee T2W 6H6	David_Strong@hc-sc.gc.ca	(403) 292-6182

Health Canada First Nations and Inuit Health			
Medical Officer/Health	**Address**	**Email**	**Telephone**
Dr. Wadieh Yacoub	730, 9700 Jasper Ave. NW Edmonton T5J 4C3	Wadieh_Yacoub@hc-sc.gc.ca	(780) 495-3391

Dominion Land Survey System (DLS)

Before Western Canada was settled, it was necessary to be able to accurately locate and describe parcels of land (e.g., for a title). This was done through cadastral (recoding property boundaries including subdivision lines, etc.). The lands were surveyed and divided into square block, 6 x 6 miles called townships. Each township was then divided into 1 x 1 mile areas called sections.

Locating a Legal Land Description (LLD)

The easiest way to locate a parcel of land in Alberta is to read the LLD description from the right to the left, and plotting it using an appropriate map (one marked with townships and ranges).

An example of a LLD is as follows:

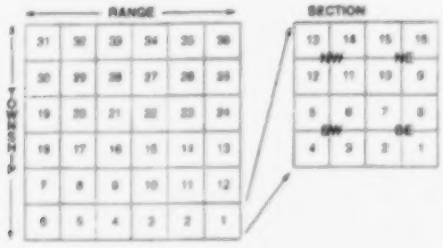
LSD	Section	Township	Range	Meridian
16	**28**	**49**	**11**	**West of the 5th**

Following this approach it essential to understand the following terms (it is useful to refer to the diagram following this section):

- **Meridian** – is a north-south line used as a reference point. The primary meridian is located just west of Winnipeg, and is the basis for land surveying throughout the Prairies. Meridians increase west or east from the prime meridian. The 4th Meridian is located at the Alberta/Saskatchewan border, the 5th Meridian passes through the Town of Stony Plain, and the 6th Meridian passes approximately 48 km (30 miles) east of Grande Prairie or approximately 3 km east of the Town of Jasper.
- **Ranges** – are numbered from east to west starting from each meridian. The numbers increase from the east to the west within a Meridian. A range is 6-miles or 10 km wide.
- **Townships** - increase in number from the south to the north. They start the 49th parallel at the Canada/USA border (1 is at Alberta/Montana border and they progress northward to township 16 at the Alberta/NWT border or the 60th parallel). Each township is 6 miles or 10 km long.
- **Sections** – is a parcel of land that measures 1 mile x 1 mile or 640 acres. A township contains 36 sections of land. Sections are numbered within a township starting at the southwest corner being section 1 and the next section immediately west of section 1 is section 2. Section 7 is immediately above section 6. The numbering of sections proceeds in a serpentine fashion until section 36 is located in the northeast corner of the township.
- **Quarter** – is a quarter of a section or 160 acres. Quarter sections are identified as being the northwest quarter (1/4 NW), northeast quarter (1/4 NE), southwest quarter (1/4 SW) or southeast quarter (1/4 SE).

- **Legal Subdivision (LSD)** – each section of land is further broken down into 16 parcels of 40 acres each. These are called LSDs. They are numbered 1 through 16. The numbering begins in the southeast corner of the section LSD 1 across to LSD 4, located in the southwest corner. The numbering continues in a serpentine fashion until LSD 16 is reached in the northeast corner.

The numbering for sections, ranges and townships of the Legal Survey Description is shown in the diagram below:



Further examples

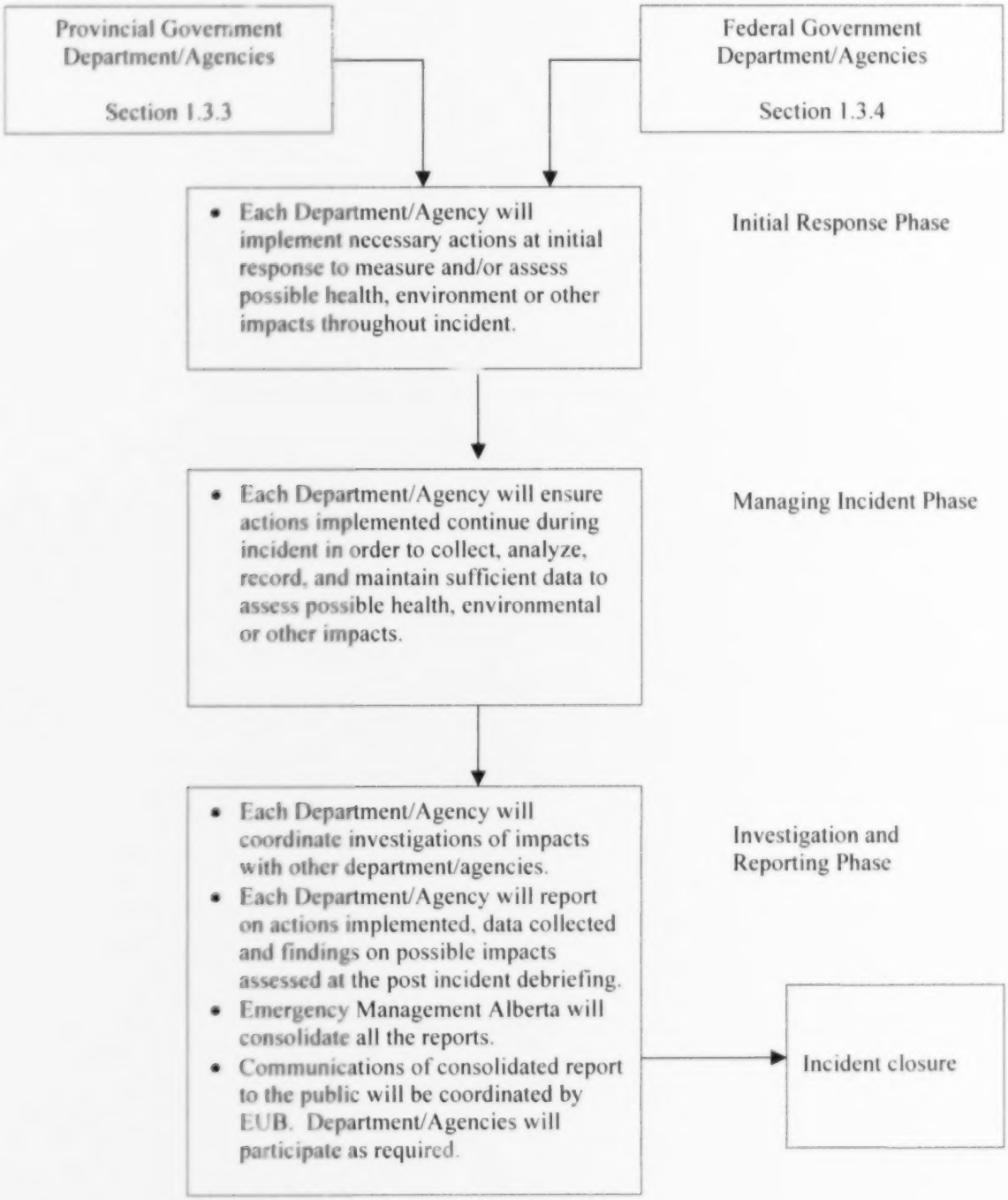
For the Town of Grimshaw the LLD. is:

LSD	Section	Township	Range	Meridian
-	**17**	**83**	**23**	**W5**

For the Town of Drumheller the LLD is

LSD	Section	Township	Range	Meridian
-	**11**	**29**	**20**	**W4**

Follow-up Process After Major* Sour Gas Releases to Determine Impacts


Provincial Government Department/Agencies
Section 1.3.3
Federal Government Department/Agencies
Section 1.3.4
• Each Department/Agency will implement necessary actions at initial response to measure and/or assess possible health, environment or other impacts throughout incident.
Initial Response Phase
• Each Department/Agency will ensure actions implemented continue during incident in order to collect, analyze, record, and maintain sufficient data to assess possible health, environmental or other impacts.
Managing Incident Phase
• Each Department/Agency will coordinate investigations of impacts with other department/agencies.
• Each Department/Agency will report on actions implemented, data collected and findings on possible impacts assessed at the post incident debriefing.
• Emergency Management Alberta will consolidate all the reports.
• Communications of consolidated report to the public will be coordinated by EUB. Department/Agencies will participate as required.
Investigation and Reporting Phase
Incident closure

*Major sour gas release will mean a Level 3 High Impact Incident